

SIXTY-SECOND ANNUAL REPORT

of the BOARD OF TRUSTEES *of the*

OHIO STATE UNIVERSITY

TO THE GOVERNOR OF OHIO

FOR THE YEAR ENDING
JUNE 30, 1932

MCMXXXII

THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO

THE OHIO STATE UNIVERSITY

HONORABLE GEORGE WHITE,
Governor of Ohio,
Columbus, Ohio.

MY DEAR SIR:

I have the honor to present to you the annual report of the Board of Trustees of the Ohio State University for the year ending June 30, 1932, as required by law.

Yours very truly,

EGBERT H. MACK,
Chairman Board of Trustees.

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ANNUAL REPORT OF THE PRESIDENT

HONORABLE EGBERT H. MACK,
*Chairman of the Board of Trustees,
The Ohio State University.*

DEAR SIR:

I have the honor to present through you to the Board of Trustees of The Ohio State University for transmission to the Governor of Ohio, as required by law, the Sixty-second Annual Report of The Ohio State University for the year ending June 30, 1932.

NECROLOGY

It is with sorrow that I report the death of Professor George Wells Knight on February 10, 1932. Professor Knight came to the University in 1885, and during his forty-seven years of experience he was a professor of History, English, Economics, Constitutional Law, International Law, but as time went on his interests became definitely fixed in the field of American History, where the chief attraction for him lay from the beginning. In the early days one professor was called upon to do a variety of things if he had the ability, and this accounts for the wide spread of Professor Knight's teaching. He headed the work in American History for long years and at the time of his death had the title of Professor Emeritus of History.

He also had administrative proficiencies and was acting dean of the College of Law for a year and Dean of the College of Education for a period of six years, meanwhile retaining his direction of the work in American History.

The University faculty adopted a touching memorial in recognition of Professor Knight's long and highly constructive services, and various groups and individuals expressed their appreciation and appraisal of his activities in the interest of education, citizenship, and public service. This report offers opportunity only to express briefly the deep sense of University and community loss in Professor Knight's death. His character, his unflinching zeal for University achievement and progress, and his remarkable ability as a teacher receive daily expression in the on-going of the University and were fittingly memorialized in the tributes presented at the time of his death. The contribution of Professor Knight and others of long service is with the deepest gratitude accepted by the University, which at the same time recognizes its inability to give adequate appraisal.

Miss Gertrude Kellicott died on June 26, 1932, after thirty-five years of the most faithful and constructive services in the University Library. Miss Kellicott had charge of the accessioning of the new books coming into the Library, and in the performance of that service carried on a very wide correspondence with book dealers at home and abroad and assisted in the creation of a system of accessioning which was entirely adequate to a growing activity. Miss Kellicott was the daughter of a former professor in this University, and almost all her life was spent in and about this institution. She rendered service in an area where faithfulness, attention to details, and constant readiness to serve are the prime requisites and she met in the highest degree all of these qualifications.

An official report covering the past year would be incomplete without mention of the death of Edward Orton, Junior, although for some years preceding his death he was not actively connected with the University, yet for many years he was connected with the institution in a very important way. His death occurred on February 10, 1932, a few hours after the death of George Wells Knight. He came here in 1873 when his father became the first president of the University, and from that time forward for a period of fifty-nine years he was either in the University or closely associated with it. He created here the first department of ceramic engineering in the world and was the moving spirit in obtaining not only an appreciation of the service such a department might render but also the means for establishing and maintaining the work. He was a giant figure in the field of ceramics, was for a term the president of the American Ceramic Society, operated a private industry for the manufacture of pyrometric cones, and always kept close to the theoretical and practical phases of the ceramic industry.

In his University experience he was for years the head of the Department of Ceramic Engineering and for a number of years also the Dean of the College of Engineering. He was likewise deeply interested in military affairs, especially as they were related to national defense. During the World War he was charged with the responsibility of developing adequate land transportation facilities and revolutionized this division of service. He was also very active in drafting and advocating the National Defense Act and the subsequent act which provided for the R. O. T. C. in land-grant colleges. His military interest was maintained up to the time of his death.

He established, in honor of the memory of his father, the Edward Orton Memorial Library of Geology; this is located, very appropriately, in Orton Hall. For years he made an annual contribution to its development and service, and at his death left to the University for its future maintenance the proceeds of a life insurance policy of ten thousand dollars. The University in other ways also is a prospective beneficiary of his love for the institution over which his father presided for eight years and in which he served as a teacher for many years thereafter.

His was a sterling, unswerving character; his interests and activities led him into many fields in all of which he demonstrated qualities of the highest leadership. The University faculty adopted a memorial covering General Orton's character and activities, and other groups and organizations paid tribute to his achievements in stirring terms.

Of these three persons it may well be said that their lives were builded into the spiritual structure of the University, and their influence will receive continual expression in the University's activities and accomplishments.

HONORARY DEGREES

At the June Commencement the degree of Doctor of Science was conferred upon Professor Walter C. O'Kane of the University of New Hampshire, for preeminence in the field of Applied Entomology. Professor O'Kane is a graduate in Arts of the Ohio State University in 1897.

The degree Doctor of Science was conferred upon Frederick C. Marvin, Director of the United States Weather Bureau. Mr. Marvin entered the Bureau in 1884. He is a graduate in Mechanical Engineering of The Ohio State University in 1883.

CERTAIN FACULTY ACTIVITIES

During the year Professor Albert B. Wolfe, Chairman of the Department of Economics, taught in the University of California. He went there upon special invitation for the year, and his work was provided for by adjustments in the department. Such experience is very much appreciated by the professor, and it is a source of strength to the University since the period spent in another university is one of new relationships, new opportunities for comparisons, and new enthusiasms. Altogether these exchanges or special tours of service abroad should have the cordial support of the institution. The results to the University of such contacts and experiences are various and in great part indirect, but yet very valuable.

Professor Carl Wittke spent the Winter Quarter lecturing in Germany, especially in university communities. He received a special invitation to deliver addresses which would present the motive and genius of American government to German cultured audiences, in which addresses the activities and achievements of Washington and his vast influence upon the character of our government would be set forth in a two-century perspective and in a thoroughly scholarly fashion. Professor Wittke's experiences on this tour were of the most stimulating and delightful sort, and he brought to the German university communities the best spirit of the present-day university in America.

The urge is ever toward mutual international understanding and an increasing degree of national cooperation, and the contribution made by the exchange of professors going on between certain universities in the United States and certain continental universities is productive of great good, and it is especially pleasing at this time that one of the leading professors of our own State University had the opportunity of bringing to European attention the scholarship and enthusiasm to be found in a state-supported institution. The relations of this sort have usually been between the large endowed universities in this country and European institutions, and it is believed that the rapid growth and wide sweep of the state universities deserve the recognition thus extended to Professor Wittke.

DEAN ALFRED VIVIAN

For some years Dean Alfred Vivian of the College of Agriculture looked to 1932 as the date of his retirement, and upon his own request the Board of Trustees conferred upon him the rank Dean Emeritus of Agriculture and he retired as of June 30, 1932. During his administration he had certain objectives which he desired to accomplish. One of these was the removal of the livestock and, in large part, the horticultural interests of the University to the farm on the west side of the Olentangy River. This was accomplished, and a very complete group of farm buildings of excellent quality and with developing gardens stand as a testimonial to his vision and tenacious purpose.

He was likewise enthusiastic about the Department of Home Economics and aided its expansion and intensive growth continuously, and had the satisfaction of seeing it develop into a very flourishing and useful department. In his administration also the great growth of Agricultural Extension took place and he was deeply interested in the organization of this work and in bringing it directly home to the farm people of Ohio. This activity represents service by the University on the farms of the State and Dean Vivian gave it most intelligent administration. He was deeply sympathetic with the students in their university life and progress, and developed various agencies in the college for

the intellectual and social interests of these young people. The students greatly appreciated the Dean's sympathetic attitudes and held him in the highest esteem.

His selection of new members of the staff and his recommendations for promotion were always carefully made and he developed in the college a staff of outstanding capacity. Through the fine activities of his faculty Dean Vivian administered the college; they gave without stint of their ability to the constructive program in which all were intensely interested. He believed in giving to the department chairman and to the professor wide liberty in planning their action and trusted in the integrity of these staff members for progress. This conception of the functions of the University teacher and administrator was well justified by the results.

Another great objective of Dean Vivian's administration was the establishment of the most cordial and helpful relation between the University and the rural people of Ohio. He had very frequent speaking engagements before farm groups, was well known in every corner of the State, was for some years a Lecturer of the Grange, and was well received in all places and on all occasions. He believed also in bringing the rural people of the State to the University, and each year in February the Farmers' Week program was conducted at the University with a constantly growing attendance. At its zenith a year ago the number of persons present at these exercises was about eight thousand. In November each year the 4-H Club boys and girls came to the University for a week of educational, social, and University experiences, and Dean Vivian was a great favorite with this group of four to five hundred young people representing most of the counties in the State. His purpose was always to take the University out to the rural people and likewise upon occasion to invite the rural people in to the University, and this interflow has resulted in benefit to both the institution and the agricultural interests of the State.

He had likewise the deepest interest in the character of the teaching; a teacher of great ability himself, he believed in the influence of the professor in the lives of the students not only in the classroom but beyond its doors. He could thoroughly sympathize with the difficulties which the student encountered in his educational progress, in his social experiences, and in his financial conditions, and he labored in season and out for a warmer understanding between students and teachers, and a development of the responsibility of the teacher for the progress of the student. He came to the University in 1902 and for almost one-half of his life here was a professor of agricultural chemistry; the remaining portion of this thirty-year period was spent in the administration of the college. He leaves a permanent impression upon the University and upon the people of Ohio, created by his deep understanding of and enthusiasm for the fundamental purposes of a State University and his abiding interest in the welfare and development of students, faculty, and rural people.

PROGRESS OF COLLEGES

The progress of the colleges will be noted in the college reports printed herein. It would make an annual report too large to print the whole report from each college since these reports are submitted in considerable detail; therefore for this annual report copious excerpts have been made from the reports submitted by the deans and departments setting forth the newer, more constructive, or more generally interesting features of the college growth and activities. The reader is referred to these reports for further information about the particular colleges.

FINANCIAL EXPERIENCES OF THE UNIVERSITY

The appropriation to the University for the biennium 1929-1930 was the greatest ever made by the State Legislature. It fell only a little short of \$10,000,000 and enabled the University to make considerable expansion in its activities in that period; but when the Legislature came into session in 1931 the shrinkage going on in industry and all sorts of productive enterprise was already noticeable and it became necessary to reduce appropriations for all State institutions, the University feeling the need for economy along with the rest. For the current biennium the Legislature was able to appropriate only about three-fourths as much as it had found for the preceding biennium, and this appropriation had to be scaled down by state administrative order to keep the expenditures of the State within the limits of the revenues. The University operated in the year 1931 upon the reduced appropriations further reduced by seven per cent, and in 1932 the reduction was continued. The retrenchments had to be made all along the line: in the expenditures for additions and betterments, for general maintenance and operation, and for personal service. The teaching or academic staff of the University for the school year 1931-32 was reduced by 91 persons; the reductions in salary which were made in all salaries from \$3,000 up amounted to nearly \$130,000; the positions cancelled amounted to over \$93,000, and transfers from personal service to maintenance amounted to about \$78,000. The net reductions made in the personal service budget for the year were slightly under \$300,000. Within this shrunken organization the work of the year has been conducted. There has been no lack of enthusiasm on the part of the teaching staff and the University educational work goes forward effectively. The decline in the registration was very slight, and the burden of instruction carried by the diminished staff was practically the same as for the year before.

The Board of Trustees and the University administration have rendered instant and sympathetic cooperation with the Legislature, the Governor, and the state administration in all matters relating to the financial experiences of the State, and the University faculty and all employees have exhibited an excellent spirit of comradeship in the University enterprise, and a sympathetic and understanding appreciation of the financial difficulties of the State has been clearly evident. The University recognizes itself as a public agency and sensitively enters into the life of the State and continuously strives to make cultural and practical contributions to the material and spiritual growth of the Commonwealth.

EDWARD ORTON MEMORIAL LIBRARY OF GEOLOGY

A bequest made by Edward Orton, Junior, whose death is noticed above, came to the University on April 1, 1932, in the amount of \$10,000. The will provided that the income from this amount should be devoted to the purchase of books and equipment needed in the Edward Orton Memorial Library of Geology which some years ago he established in memory of his father, who was the first president of the University and for many years thereafter the head of the Department of Geology and at the same time State Geologist. This bequest was fittingly acknowledged by the Board of Trustees at the time.

GIFTS FOR GENERAL AND DESIGNATED PURPOSES

The Business Manager of the University reports for the year gifts for the student loan funds, for research in engineering, for research in the College

of Education, and for various other purposes, amounting to the sum of \$65,000. These funds came from alumni groups, from industry, from foundations, and from many other organizations; in a striking way they disclose the wide interest in the educational work of the institution and in the welfare of its students.

UNIVERSITY LIBRARY

The last Legislature found that it could make only very limited appropriations for the University Library and there was danger that the legal, medical, scientific, and literary journals and the continuation of sets or series of books might be broken. When this condition became known the students came valiantly to the rescue and voluntarily contributed the sum of \$8,500 for expenditure for these purposes. The State Board of Control has undertaken to meet the further needs in this field by appropriating from time to time from its emergency funds, and the University will get through the biennium without any diminution of its periodicals and continuations. However, there has been no money during the year for the purchase of new books, and there will not be until the Legislature can give attention to the matter next year. The failure of support for the Library has been the cause of keen concern and anxiety on the part of the teaching staff and student body. The University Library for many students is the laboratory and for all of them is a source of education and inspiration, and it is hoped that adequate provision may be made for its maintenance and development by the next Legislature.

THE ALUMNI

The Ohio State University Association is a constant source of support and enthusiastic spirit for the University faculty and administration. A live organization exists in most of the counties of Ohio, and the graduates and former students in their home communities are interested and constructive citizens, are well known in the local activities, and on the whole furnish good examples of sane living and sane thinking. As their members increase, their activities and influence spread, and they are everywhere an intelligent nucleus for wise and creative planning for publicly supported and regulated education on all levels—elementary, secondary, and collegiate.

It is only natural that they should think specifically of the Ohio State University, and the organization is directed primarily to this end. The alumni are the living, doing illustrations of the purpose of the University and by their lives, to a great extent, will it be judged. The *Monthly* is a most interesting medium of communication between the University and the alumni, and under the capable and versatile direction of Mr. John B. Fullen and an able staff, this magazine has come to be the best known of such publications. Through its columns graduates can maintain a knowing connection with the University in its manifold activities, can translate it to the people and can vastly extend its benefits.

Mr. J. L. Morrill, for almost a decade as Alumni Secretary, built up the *Monthly* and stirred to a great depth the alumni interest and cooperation in the great University enterprise; his work was of the greatest benefit and significance. Then for a few years he came into the Junior Deanship of the College of Education where he had sympathetic dealings with students in their educational and social problems, and obtained an intimate acquaintance with the educational program. Thus, knowing the University inside and outside, he has a peculiar fitness for dealing with the numerous public relations which a

typical state university must have. In view of these external relations or activities and their growing variety and complexity, the Board of Trustees elected Mr. Morrill vice president to function especially in this field. He is proceeding with keen intelligence and zealous industry to increase the usefulness of the University to the people of the State.

HOME MANAGEMENT

The proper management of the home is a "consummation devoutly to be wished" and also one of the significant aims of the teaching of Home Economics. For some years a "laboratory" apartment was maintained in Campbell Hall and another in a building rented for the purpose near the campus. But always there was pressing need for a modern house on the campus in which the seniors in Home Economics might get real experience for a few weeks in "running" a home—a bit of "home-making" as realistic as possible. The Legislature of 1929 provided the money, the University architect provided the plans, Professor Faith Lanman and her staff provided inspiration and plans for organization and operation, and at the June Commencement the Grace Graham Walker Home Management House, built on the campus facing Eleventh Avenue, was dedicated with enthusiasm. The occasion was marked by the presence of many of the graduates of this department. The "Home" has two apartments, with present day "home-making" equipment, and will accommodate two groups of students.

The "Home" is very fittingly named in memory of Grace Graham Walker, for many years a professor in the Department of Home Economics, and a pioneer in the teaching of Home Management.

LAMME AWARDS

The Lamme Medal awards this year were made to Ralph D. Mershon, Class of 1890, for eminence in Electrical Engineering, and to Victor Bleininger, Class of 1901, for eminence in Ceramic Engineering. These awards call attention annually to the accomplishments of our own graduates and are steadily meeting Benjamin G. Lamme's purpose of conferring honorable distinction upon superior merit and achievement.

COLLEGE OF ARTS AND SCIENCES

A notable advance in educational methods is found in the report of the College of Arts and Sciences printed herein. The Dean's statement should have careful reading. The new program in the college rests upon the principles that:

(a) The end of the second year is a "turning point" in the experiences of many students; some have shown ability to go forward usefully with college study, others have demonstrated their inability or have concluded they desire to enter professional studies or to abandon further college study. It is a parting of the ways for many, and the new college program recognizes this condition by establishing the "Junior Division" ending at this point, and setting up certain normal standards which the student must have reached to pass on into the Senior Division. The standard seems to be an entirely reasonable one, attainable by the student of average ability and reasonable industry.

(b) If the entering student can show by examinations his proficiency in a field of study, he should not be required to repeat such work in the university classes; up to a certain maximum he is to receive University credit for these courses.

(c) The student of large ability should be enabled to go faster and farther than students of less gifted minds, and he should be given the chance to earn honors or scholastic distinction to be awarded upon graduation. This is a stirring incentive and gives the "equal chance" which we believe should feature all our institutions.

(d) Cooperation among educational departments is necessary to a much greater extent than heretofore generally practiced, both in combinations of subject matter and in methods of presentation—an emphatic way of saying again that the student and his welfare and progress are always in the focus of university purposes and activities.

(e) As the student progresses he should be given a growing liberty of planning his program and a deepening sense of responsibility for his successful negotiation of the university opportunity.

The arts college is here bending itself to a realization of what is best in our educational theory. Reenforcing and motivating all these pronouncements must as always be the highest attainable perfection in teaching and social inspiration; this we are steadily striving to reach.

EDUCATIONAL BROADCASTING

(a) WEAO.

The station has an allocation of time covering forty hours per week; its signal can be identified practically anywhere in Ohio. The State has been very cordial in recognizing its importance in the educational and publicity needs of the University. The plant is quite well equipped with the instruments best adapted to its capacity and purpose and is operated by a staff of high competency. Other colleges and universities of the State are cordially invited to broadcast their own programs from this station, and there is an increasing use by them.

(b) Our Program.

The College of Agriculture broadcasts the market reports, lectures in home economics, the "College of Agriculture Night"—a weekly program adapted especially to rural reception, and practical lectures in the field of extension. Progressive lessons in the French language and the Spanish language are broadcast on a schedule for public-school reception, and they are receiving them in many classrooms in Ohio. Broadcasting into the classrooms of the University is now under contemplation.

Other programs are provided of good quality in music, drama, news, and various educational subjects. The station is rated high by both state and federal authorities.

(c) Radio Research.

The Payne Foundation has generously provided funds to be used over an extended period for an intensive study of the value and the efficiency of educational broadcasting. The study is carried on by Doctor F. H. Lumley under the auspices of our Bureau of Educational Research; the station is presenting all its facilities for the study, and the work is proceeding in a very significant manner.

(d) Institute of Radio Education.

The Bureau of Educational Research has sponsored an annual gathering here for the past three years of colleges and governmental persons interested

in the use of radio for educational purposes, and the attendance and participation have been very gratifying. The deliberations concern a comparatively new field of activity; this "Institute of Radio Education" is now well established, and the published reports of its proceedings carry the messages and discussions of all the best-known and most aggressive "radio" thinkers and doers of the time in the educational field.

THE JUNIOR DEANS

Attention is particularly called to the four-year report herein of the work of the Junior Deans; this is an account of progress in the dealing with the most critical period in the life of the student—the freshman year. The list of topics under investigation and experiment and the methods employed are very revealing. It is the common opinion that the Junior Deans have revitalized and humanized the freshman program in a most hopeful and effective manner. The record of trial and error and result is worthy of careful attention.

THE UNIVERSITY AND THE PEOPLE

The University is now at the threshold of its sixtieth year; created especially to train in agriculture and the mechanic arts, it was, for the first five years, called "The Ohio Agricultural and Mechanical College," but since 1878 it has been "The Ohio State University"—an educational institution of broadened purpose, carefully adapted to the needs of a modern State.

The graduates of its second decade made a great name for themselves in the then opening field of electrical engineering; the names of Lamme, Scott, Skinner, Lincoln, Storer, Mershon, and others are connected with the rapid development of this field. They were all prime movers. In the technical fields, in agriculture, in the professions, in general learning, the University has contributed many trained men and women to the service of state and nation. It performs its work on the campus and out over the State and has been meeting and even anticipating the needs of our advancing civilization.

Its research has made the State richer, and its training has added a powerful and constructive element to the life of the State. Its students have for forty-five years come from every one of the eighty-eight counties of Ohio, and its graduates and former students have settled into the life of the communities of the State. In government, industry, and arts, the professions, and in the humble walks of everyday life and experience they are making their contributions to the social order. Truly, the University is a developmental agency of the State!

Its functions have been recognized by law; Section 7923 of the General Code, approved by the General Assembly of 1906, provides that the technical and professional and higher graduate training to be offered by the State should be presented at the Ohio State University, and that it should be built up to perform the State's appropriate functions in this high educational field. The University has developed its activities accordingly, and the State has intelligently and appreciatively supported its growth. Its student body has gone to sixteen thousand, its teaching staff is beyond eleven hundred, its annual expenditure of State money is from three and one-half to four million dollars, and these combined activities present a building need that seemingly has no end.

In this year, in sympathy with industry and all activities, the University has suffered a decline in revenue; the last Legislature found it necessary to

reduce the biennium appropriation by about one-fourth, and by executive order this had to be still further scaled down by about a quarter million for each year, making the available funds for this biennium about twenty-seven per cent less than for the immediately preceding one. Since about half the decline in the appropriation came in building funds, the total reduction is not so serious for the educational work as it appears, but yet it operated a very marked reduction in staff and in salaries, and in general maintenance and equipment. A little short of three quarters of a million dollars was deducted from the already greatly reduced appropriation for the biennium, and serious breaks in the educational program necessarily result.

The University can trim its program to suit the support, of course, and will use its utmost intelligence in effecting any reorganizations, but the character of its service to the people is inevitably affected in the process; and in these times of industrial shrinkage and consequent social disintegration, we are brought face to face with a question which we had been thinking was settled for all time—why should the public support education? Let us think through it briefly again.

In Ohio public support for elementary education was assured eighty years ago and gradually was extended to secondary education, and since 1900 the growth of the high schools has been remarkable. The support through public taxation has all these years been enthusiastically given, and its amount has steadily increased. Constant improvement has been made in these public schools in the program of study, in the physical plants, in the equipment, and in the teaching staff. The steady purpose has been to make these schools supply the local need for essential and fundamental education and to bring to the community the best thought about education and social welfare, and to present the development that the times required. The lifting of the levels in public education has been consistently going forward, and a general standard in intelligent training and in social and political ideals has been set up throughout the country in the most constructive way. The public schools are regarded as the most characteristic and indispensable institutions of our day.

Higher education also has been supported in a striking way by the State of Ohio. There are now five institutions maintained by the State for bringing to the young men and women who desire it an advanced education at public expense which may be general, or technical, or professional. All the important branches of learning are taught; teachers are trained; engineers, physicians, dentists, lawyers, pharmacists, and young people with business training go forth from these Universities and Colleges each year and make their contribution to the improvement of the life of the State.

Ohio University was founded in 1804, Miami University in 1809, Bowling Green and Kent State Colleges in 1911, and the Ohio State University opened its doors in 1873. Each institution in accordance with its purposes has been giving training and skilled preparation to its students to fit them for the educational, industrial, political, and aesthetic activities of the State; their graduates are found in all parts of Ohio and in many other states, and these schools are a force in the creation of a proper social order and in its intelligent maintenance.

On all three levels the people of Ohio have been generously supporting education, and they act in accordance with a certain philosophy which by common consent has justified itself up to the present. This philosophy may be

briefly expressed in this way: We believe in democracy; here the people rule and are both governor and governed. The character of the laws, the functioning of the courts, the effectiveness and honesty of our governments all depend upon the people, and in order to sustain these responsibilities and realize these opportunities a high degree of education must be available for all. It is the essence of democracy that every person shall have an equal chance, so far as the law can create it, for education to prepare for participation and usefulness in the common life. Through education those with ability can be discovered and trained and those with less ability can be trained to the extent of their capacities. All must have the opportunity for education so that the democracy may be served by those whose native ability and whose character are of the highest quality. We must train all to find the best. This philosophy properly may be spoken of as *political*.

The second principle is more largely *social*; it requires that every individual should have the opportunity for self-development to the maximum, not only for what he may therefrom contribute to the State, but also that his own personal life may be enriched and his social possibilities be developed. There is no sharp dividing line between the social and political principles of the philosophy underlying a democracy, since training which fits for one capacity contributes heavily also to the other. They are inextricably related; both must go forward if the government by the people is to flourish. Our keynote so far has been "education"; the exact scope of that term has never been ascertained, but our tendency is to give it a very wide meaning and a very extensive application, and in its maximum sense we think of it as the central, the fundamental, and the indispensable element in our type of civilization. Education must go on on all levels in order to reach these political and social ideals, and the same reasons for the support of elementary education first, then secondary education, underlie the developing support given in Ohio for the last forty years to the colleges and universities.

The life of the State depends upon education; the chief business of the State, therefore, is to provide for education, and we have an unbroken record of advancing interest, of popular support, and of productive usefulness in these higher institutions. We have no experience with a civilization which is not founded upon education, and the "skilled hand and the cultivated mind" have worked wonders in our social and industrial progress. We cannot imagine a desirable social order which is not permeated by educational ideals and results.

Nor do we know of any precise method of measuring the effects of our educational efforts. They show results in responsive and capable citizens, in an improving society, in more responsive human relationships and in enriched and satisfying lives. We believe that these are the effects, and yet there is no system of physical measurement or of statistical accounting which can definitely and conclusively express the results. *Our faith nevertheless is supreme*, and on all hands we are certain that we see the fruit of our educational activities. We are ignorant of a democracy which can function otherwise, and we are fearful of experiences which rule out or diminish our educational program.

We are now in an economic condition, world wide, which is featured by falling markets, reduced salaries, unemployment, human suffering, and a slow disintegration of social effectiveness and personal comfort. Our system of industrial and political organization seems on the verge of collapse, and all governmental activities are being scrutinized to find where they can be reduced and how far, in order that the expenditures may be commensurate with a

greatly straitened income. Individuals and government alike feel the strain, and large reductions in public expenditures are inevitable. At this point the crucial question arises, shall all government expenditures be trimmed ruthlessly and proportionately or should discrimination be made among the activities for which the government is responsible? If the philosophical principles stated above are sound, if they must continue to motivate our civilization, if they are still to be regarded as fundamental, then it is clear that education must be a *preferred charge* upon the public resources. Its need is not less but even greater in times like these. It is believed that there are other governmental functions of less importance, and if the present stringency calls for a reduction or a cessation of certain governmental activities, many of them as we are organized today could be dispensed with in order to support a reasonable educational program.

I believe I express a feeling inherent in the people of Ohio when I say that education must be unflinchingly carried forward. It cannot be suspended; we must prepare the oncoming generation for a more effective administration of public affairs, for a richer social life, and we must pass on to the future the intrinsic and characteristic benefits of the institutions of our times. We can do no less than be faithful to our past, our ideals, and to those who shall come after us.

At this point a great *responsibility attaches* to those in *charge of education*. That is, to study the educational organization and processes of today with a view to diminishing or concentrating or readjusting them without harm to the beneficent results expected. Under the pressure of failing resources, the educational program must be probed anew and must be appraised with the highest intelligence of which we are capable. Such appraisal, it is believed, will result in adjustments and changes which will leave the essential virility of the program but which will reduce the cost of operation and maintenance. The schools and colleges on a public foundation face this self-searching and appraisal as a solemn responsibility, and when this has been done and the minimum program has been arrived at, the State will make a desperate effort to give it adequate support. If necessary some other State functions must remain in abeyance until better times. If it should be found that the State cannot support a minimum program, then let us admit that what we can do in the way of education is inadequate, but let us go forward with all the support that can be mustered for this shrunken program, looking to the day when the educational work may be carried forward in a way commensurate with the demands placed upon it. We are finding, and we shall continue to find, that our scale of living is shrinking, and it is one of the tests of our education to adapt ourselves to a lower standard and yet to enable us to derive all the essential satisfactions and happiness on the lower scale. Saner and plainer living is coming perforce, and there is no reason why such an era should not be featured by higher thinking, and this seems to be the condition for which we should be preparing. I have confidence that education will not fail us but that we shall miserably fail without it; unless it is maintained in high quality and with a program and facilities adequate to furnish the educational opportunity to all and the chance of maximum self-development and advancement to each, it will fall short of our needs. By this process leaders may be found and trained and followers be educated to the point where they can understand, appreciate, and participate in the program which wise leadership will present.

CITIZENSHIP AND ECONOMICS

In coming down to a University program more nearly constituted of essentials, we cannot fail to *emphasize citizenship and economics*, not to the exclusion of any vital subjects but as a fundamental supplement thereto. A gaping need of our times has been and is intelligent participation in our democratic government.

Our colleges and universities have sent out young men and women specifically trained for anything except civic duty and opportunity. In a society studded with the college-bred man and woman, we have furnished a spectacle of crass ignorance about government and almost criminal neglect of civic fundamentals. We seem to expect intelligent patriotism and unselfish participation in government as by-products, mere incidentals of our educational régime.

Is there not an opportunity, even an imperative demand, for training in the essentials of government—of our democratic conception of government—in our universities and colleges? As an expected incident it has miserably defaulted. Each citizen should be prepared to stand up and give a reason for his governmental beliefs and practices, and should be ready to conserve the best in the present order and advance reasonable grounds for integrating changes. As a people we do not show the knowledge of, the participation in, or the spirit of responsibility for, democratic institutions. A great field for college training here lies fallow! What can we do about it? We can at least provide that *every college student* must come into courses on citizenship, skillfully programmed and inspirationally presented. We can no longer evade this call! We know now that something more than general education is needed to make responsive citizens. The State educational institutions particularly must feel a "mandate" to this end.

Again, no evidence is now lacking to show our vast ignorance, as a people, of fundamental economic principles. The debacle of the last three years has left us all stranded and gasping and befuddled. Our ignorance has amazed ourselves! A much less ingenious person than "Coin" Harvey could popularize false economic doctrine, and has successfully been doing so in recent times. We have with reliance imbibed our economic concepts from newspapers or periodicals, contentiously or seductively set forth; we have brought from the schools little to act as a check or a balance in this welter of economic theory. The charlatan has received even more attention than the sound economist; we have been unable to distinguish! This experience of the last three years is a sad commentary upon the general state of knowledge of fundamental economics on the part of a society strewn with college-trained people!

In no university program for the future, however restricted it may be necessary to make it, can fundamental civic and economic training be omitted. *Nor should these be left to student choice—they should be required!* Our trouble is going to be to present them appealingly and effectively as working tools for every citizen in a democracy; pedantic or didactic treatment will fail! We are now responsibly confronting this problem and our duty; as an institution drawing its support from the people through public taxation, the Ohio State University should resolutely find the way! Government and business are inextricably related in our social order.

EDUCATIONAL PROGRAM SENSITIVE TO SOCIAL CHANGES

There is likewise another field in which University thinking is now becoming acute, and that is the adaptation of the educational work in courses

and curricula to the ever changing requirements of industry, education, the professions, and the general activities of the everyday world. This same period of economic stringency has brought out like a flashlight these shifting requirements called for in preparation and application needed for success in the life of today. The traditional training for the engineer, the agriculturist, the journalist, the teacher, the professional and technical student, is not sufficient. Not only must the training given by the universities induce a high degree of understanding of the technical and professional requirements, but it must also lay a broad foundation for such study which is much more extensive and intensive than formerly was required. In this complex civilization into which the graduate of today must go and in which he must function effectively and sympathetically in order to get forward, no one is going to succeed at his best level unless he is wide awake to civic requirements, economic conditions, political responsibilities, and all of those elements which contribute to make the world go around in this advancing age.

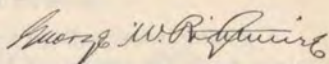
This will mean that no student should be permitted to carry out with him a diploma of an institution in any field unless he has while a student been given an opportunity, and perhaps has been required, to devote attention to the effective and prolonged study of certain basic fields; these will include as effective tools, English, a special study of economics, a special study of what might be called, for want of a better term, democratic government with a personal reference, a special study of psychology, and a considerable degree of attention to what might be called the social studies or the "social sciences." Many people say that the term "science" is misused in this connection because there is nothing certain or assured or rutable in these fields, but it can very ably be contended that the term is just as applicable as it is when used along with the word "physical" or the word "biological." It is trite to say that the "physical sciences" have changed immensely in twenty years. In fact, the whole theory upon which the physical sciences proceed has had a turning over in the last quarter of a century. Celestial mechanics and quantum mechanics have been reoriented; biological sciences show the principle of evolution at work, not only in what happens in nature but in what is happening in our conception of these sciences. A short comparative study of this kind will make it perfectly clear that there are social sciences and also that we must as individuals cultivate an awareness of these sciences and a knowledge of their developing principles. In other words, the men and women of tomorrow cannot at all succeed on an educational basis which might have been deemed sufficient for the man or woman of yesterday or of today. We are in a world of flux, of changing conceptions, of ingenious and fruitful hypotheses, and we must recognize these conditions in our university training to a greater extent than ever before. We must now be prepared to send into the world's activities young men and women definitely and more adequately equipped, and this will mean on the part of the universities considerable reorientation of course and curriculum purposes and, therefore, of educational methods and subject-matter requirements. There is here a vast field calling plaintively for the wisest attention of which a university faculty is capable and to which the faculty must inevitably attend.

"BY THEIR FRUITS YE SHALL KNOW THEM"

A state university presents two great aspects. It is a service station and meets the needs of individuals and groups throughout the State by extension

services, by technical and professional and scientific counsel in person or by publication, by research in many fields, by being alert to the advancing and changing needs of the Commonwealth, and by mobilizing the educational resources to meet them. Its great and permanent contribution, however, must be its graduates and the many students who, although not graduates, yet for a longer or shorter period felt the educational processes and the social implications of the student life. By this product must the University be justified. In its fifty-nine years of activity, the Ohio State University has sent back into the life of the country more than twenty-seven thousand graduates, and sixty-five thousand part-time students. These have been forceful and constructive in large measure and in varying degrees in the community life; their development at the hands of the University, their inspiration and purpose resulting from University life, the ideals and the vision coming from the educational leaven, the skill and the techniques imparted by the training of the University—all these have through the years been given back to the State through the daily lives of those who for a term came under the kindly and stimulating ministrations of the University. All over Ohio are men and women, capable and helpful in the community life, successful in their private lives, who gratefully attribute their vision and progress to the University.

These people must forever be the great answer to the question—why a University at State expense? and the answer is found in every community! They are the natural and the sympathetic translators of University organization, purposes, procedures, and accomplishments. They are the reasons for its being; upon them the University rests its case. If we keep our University efforts eternally focused upon the student, our product in men and women will continually lift the level of the social order and develop the ultimate material and human resources of the State!



President.

Reports of Colleges and Divisions

THE reports from colleges and divisions cover the biennium and are therefore in most cases rather extended. It has been necessary to select portions for printing because of the volume of material submitted. The selections printed are regarded as the more important parts, carrying the greatest interest; in some cases the selections are quite full so that an activity or a program which is rather new or which is still undergoing experiment may be more completely brought to the attention of the public. It is regretted that there is the necessity for omitting any portion of any report, but a lack of printing space makes this inevitable. Where a report has been printed by selections, appropriate marks (asterisks) are inserted to show where the text of the report has been omitted.

GRADUATE SCHOOL

In the following report I have endeavored to give a brief account of important events in the history of the Graduate School for the academic year 1931-32; and I have included whatever information seemed to be necessary to enable one to judge the position the Graduate School occupies in our University today.

GROWTH IN NUMBER OF REGISTRANTS

A distinguished college president writing in the early years of the present century made the prediction that the greatest advance in the field of education during the first half of the century would consist in the growth of graduate work in our universities in general, and especially in the great state universities. To what extent this prediction has come to pass in our own University, at least so far as growth in numbers is concerned, is shown in the following tables, in which is given the registration during each year of the last decade and also the number of different graduate degrees conferred during the same period.

The impression still lingers that graduate work in our universities is confined to a limited number of students; yet an analysis of the registration figures in our own University for the academic year 1931-32 reveals the fact that not only has the registration in the Graduate School exceeded that in any of the colleges, but the graduate degrees conferred have far outnumbered the baccalaureate degrees conferred by any one of the colleges that form a constituent part of our University.

This remarkable growth in the number of graduate students is not confined to our own University; the graduate schools throughout the country have shared in this increase, although, with perhaps a single exception, none of them to so great an extent. This growth could easily have been forecast; indeed under normal conditions it was inevitable. With the gradual advancement of civilization, problems in the domain of society, of government, of industry,

must of necessity become increasingly complex and require more highly trained minds for their solution. It has come to pass that students who formerly were satisfied with a high-school education are now entering our colleges, while those who withdrew from the colleges upon receiving their baccalaureate degrees are now entering the graduate school in ever increasing numbers. Normally this advance would undoubtedly continue, but it is impossible to predict just what may be the temporary effect of the conditions which now prevail.

ENROLLMENT

1922-23.....	768
1923-24.....	941
1924-25.....	1158
1925-26.....	1305
1926-27.....	1539
1927-28.....	1781
1928-29.....	2070
1929-30.....	2444
1930-31.....	3004
1931-32.....	3404

We must keep in mind that graduate students are spending one or more of the most important years of their lives in an endeavor to equip themselves adequately for the task of playing a significant part in the advancement of the welfare of society. If this time is to be spent wisely, universities must provide the proper facilities for study and research. Inevitably this requires constantly increasing appropriations. The members of the instructional staff must be masters of their subjects, men able to give zest and energy to research; such scholars can be secured only by paying adequate salaries. The apparatus required for the solution of problems in various fields of investigation is becoming

DEGREES CONFERRED

Year	Ph.D.	M.A.	M.Sc.
1922-23.....	28	91	36
1923-24.....	24	89	43
1924-25.....	38	131	55
1925-26.....	31	145	52
1926-27.....	46	157	50
1927-28.....	44	199	59
1928-29.....	67	251	71
1929-30.....	68	229	92
1930-31.....	102	312	104
1931-32.....	93	379	159

ing more complicated and delicate, and correspondingly expensive; our libraries which are really the laboratories for many of our departments, must not only be provided with the journals and magazines which serve as the great storehouse of knowledge, but must also have available the ever increasing output of valuable books. The university that fails to provide adequate facilities will likewise fail in its opportunities, for it is upon the graduate student we must more and more rely to solve the complex problems of our modern civilization.

THE GRADUATE SCHOOL AND THE OHIO COLLEGES

Ohio is adequately provided with colleges of various degrees of efficiency. The Ohio College Association, which requires certain standards for admission, has a membership of 37, including our own University. The extent to which

the Graduate School is serving these colleges is shown in the following table, which lists the number of graduates of each of these colleges registered in the Graduate School for the academic year 1931-32.

Antioch College.....	9
Ashland College.....	18
Baldwin-Wallace College.....	10
Bluffton College.....	45
Bowling Green State Normal College.....	44
Capital University.....	45
Case School of Applied Science.....	4
Cedarville College.....	10
Defiance College.....	37
Denison University.....	65
Findlay College.....	8
Heidelberg College.....	30
Hiram College.....	16
John Carroll University.....	2
Kent State College.....	42
Kenyon College.....	12
Lake Erie College.....	2
Marietta College.....	27
Miami University.....	65
Mt. Union College.....	40
Muskingum College.....	86
Oberlin College.....	40
Ohio Northern University.....	66
Ohio State University.....	1222
Ohio University.....	164
Ohio Wesleyan University.....	136
Otterbein College.....	74
Rio Grande College.....	35
St. Marys of the Springs College.....	2
University of Akron.....	12
University of Cincinnati.....	9
University of Toledo.....	14
Western College for Women.....	5
Western Reserve University.....	18
Wilberforce College.....	15
Wilmington College.....	23
Wittenberg College.....	58
College of Wooster.....	46
Xavier University.....	1

* * *

DISTRIBUTION OF STUDENTS AMONG DEPARTMENTS

Naturally the departments vary greatly in their ability to attract students. Most of the departments are adequately equipped in instructional staff and in laboratory and library facilities to accept candidates for the degree of Doctor of Philosophy. In a few departments candidates for the Master's degree only are accepted. The table below shows the total *gross* registration in the various departments of the University for each quarter of the academic year 1931-32, as well as the total *net* registration for the year. It should be added that the figures given in the table include only the number of students *majoring* in the departments. It follows, therefore, that in most of the departments there was registered an additional number of students who were classified as "Special" or who chose to elect some minor work in the departments.

GROSS REGISTRATION OF GRADUATE STUDENTS, BY DEPARTMENTS, FOR EACH
QUARTER OF THE ACADEMIC YEAR 1931-32; ALSO THE TOTAL NET
REGISTRATION FOR THE YEAR

Department	Summer Quarter	Autumn Quarter	Winter Quarter	Spring Quarter	Total Net Registration
Accounting	10	9	8	8	22
Adult Education	0	1	1	2	2
Agricultural Chemistry	8	8	11	11	14
Agricultural Education	23	1	2	5	29
Agricultural Engineering	1	1	3	0	3
Anatomy	7	5	3	4	13
Animal Husbandry	7	12	9	9	18
Astronomy	1	0	0	0	1
Bacteriology	21	14	18	19	35
Botany	36	31	29	28	57
Business Organization	40	55	47	60	99
Ceramics	4	13	11	11	15
Chemical Engineering	22	21	24	28	38
Chemistry	88	104	101	103	168
Civil Engineering	0	7	6	9	9
Classical Languages	33	10	10	11	36
Dairy Technology	3	7	7	5	7
Economics	25	29	31	24	46
Electrical Engineering	7	13	14	16	24
English	128	76	74	83	202
Farm Crops	4	3	2	2	4
Fine Arts	13	15	13	13	30
Geography	10	10	11	12	22
Geology	4	9	7	6	12
German	9	10	7	9	16
History	162	59	59	65	216
History of Education	9	2	2	3	9
Home Economics	54	24	20	18	75
Horticulture	9	15	15	15	22
Industrial Engineering	0	2	3	2	3
Mathematics	46	29	31	33	73
Mechanical Engineering	1	4	4	4	5
Mechanics	1	0	0	0	1
Metallurgy	1	7	9	9	10
Mineralogy	1	1	1	2	2
Music	18	8	7	7	26
Pathology	2	3	3	0	5
Philosophy	10	11	11	11	17
Phonetics	2	4	4	5	3
Physical Education	45	8	12	12	59
Physics	44	41	44	39	74
Physiological Chemistry	2	7	5	11	12
Physiology	11	15	18	16	27
Political Science	18	12	13	13	32
Poultry Husbandry	1	1	0	0	1
Practical Arts and Voc. Educ.	92	28	26	37	115
Principles of Education	165	69	62	86	219
Psychology	96	76	78	77	159
Romance Languages	47	25	22	24	64
Rural Economics	6	10	12	13	22
School Administration	491	91	75	101	552
Sociology	30	38	39	30	65
Soils	4	10	11	8	13
Veterinary Medicine	7	9	10	9	13
Zoölogy and Entomology	68	70	69	61	131
Special	246	149	144	119	457
TOTAL	2,193	1,292	1,258	1,308	3,404

THE PERSONNEL OF THE GRADUATE STUDENT BODY

While our graduate students are drawn from many fields of activity, it is of interest to note the number of registrants in the principal groups represented as given in the following table.

GRADUATE STUDENTS IN THE OHIO STATE UNIVERSITY

Graduate assistants in The Ohio State University.....	168
Assistants and above in The Ohio State University.....	331
Instructors in Ohio colleges.....	189
Instructors in colleges outside of Ohio.....	105
Elementary- and secondary-school teachers in Columbus.....	217
Elementary- and secondary-school teachers outside of Columbus..	867
Principals in elementary and secondary schools.....	191
Superintendents	155
Instructors in teachers colleges and normal schools.....	19
Persons employed in state institutions (Blind, Deaf, State Dept. of Edu., Bur. of Juvenile Research, etc.).....	15
State and Federal bureaus.....	54
Persons in business.....	11
Fellows and scholars.....	62
Ministers	10
Miscellaneous	1,010
TOTAL.....	3,404

* * *

SOME STUDENT PROBLEMS

The rapid increase in the number of graduate students is naturally a source of satisfaction, indicating as it does a growing desire on the part of the student to obtain a more thorough preparation for life. Unfortunately, not all the persons who apply for admission to the Graduate School are actuated wholly by a desire for learning. Some of them, realizing that the possession of a graduate degree is a great asset in securing a position or an advancement, have an eye not so much on the training for which the degree stands as on the degree itself, and they wish to obtain it in the shortest possible time. Moreover, it is a very common practice for the authorities of the smaller colleges of limited income (and for an increasing number of high schools) to insist that those members of their instructional staff who have only the baccalaureate degree should secure at least a Master's degree as a requisite step if they wish to maintain their position on the staff of the college. Some of these are beyond the years in which graduate study can be successfully pursued; others are young and may be scholars of ability, but they are away on limited leaves of absence and feel the necessity of obtaining a graduate degree in the quickest possible time. Both groups are likely to be unsatisfactory. The above statements will suffice to show that there are student problems in the Graduate School as well as in the college. Without exception, however, the graduate student is a seriously minded individual. Student activities and the lure of the commencement exercises have no attraction for him. He may not have the ability to carry on graduate work in a very satisfactory way, but at least he has a definite goal in view and summons all his energy to reach that goal.

SOME GENERAL REMARKS

The changes brought about in the administration of the graduate work of the University, as a result of the study and recommendations made by the

special committee on graduate work appointed by the President of the University, have proved to be of great value. The larger membership of the Graduate Council has made it more representative and has increased the interest in graduate work. The general comprehensive examination given well in advance of the time at which the candidate for the Ph.D. degree hopes to come up for his degree, has served not only to impress upon the student the importance of a thorough foundation upon which the dissertation is to be built, but has also made possible the discouragement of those who have not the special ability for continuing graduate work to advantage. The prompt printing of the abstracts of the Masters' theses and Doctors' dissertations has proved a successful solution of a difficult problem. These abstracts are eagerly sought by university libraries, not only in our own country but abroad as well. Another outgrowth of the work of the Committee is the printing of "The Graduate School News Letter," issued three times annually, which contains information of value to all those interested in graduate work.

A word may be said in closing this report as to the challenge presented to all higher education by the great political, social, and economic problems of the present crisis. In discussing the essential contributions of universities Professor Whitehead says, "They have been the home of those ideals that lead men to confront the confusion of their times." This confusion must be confronted with trained intelligence, with imaginative understanding, with the unselfish will that issues in patriotic service. If the universities fail, where shall training for leadership, for large-minded citizenship be found? It may well be asked what can be done in the enlargement of special fields of study, the awakening of interest, the presentation of needs and opportunities, that the Graduate School may make its share of effective contribution to "confront the confusion" of our time. These are questions to which the Graduate Council must give serious attention.

* * *

WILLIAM MCPHERSON, *Dean.*

COLLEGE OF AGRICULTURE

STUDENT ENROLLMENT

The enrollment of students in the regular courses of the College was maintained in a rather remarkable way considering the financial stress of the two years covered by this report, and was as follows:

	1930-31	1931-32
Four-year courses in Agriculture.....	669	627
Four-year courses in Home Economics.....	503	545
TOTALS.....	1,172	1,172

SHORT COURSES

A change was made in the short-course offerings to meet a changing demand in the type of instruction that seemed to be desired. The eight-weeks Winter Courses which have been given since 1907 had declined in enrollment to the point where it seemed no longer profitable to continue them. There has been a growing demand for still shorter courses (of one week or less) on highly specialized subjects. The following courses were given during the biennium:

<i>Course</i>	<i>Length of course</i>
Power and Power Machinery.....	2 weeks
Swine Production	5 days
Horse Production	5 days
Short Course for Herd Improvement Association Supervisors and Dairy Cattle Herdsmen.....	15 weeks
Milk Testing	2 weeks
Market Milk	5 days
Butter Manufacture	5 days
Ice Cream Manufacture.....	5 days
Special Fruit Growers.....	5 days
Commercial Vegetable and Potato Growers.....	5 days
Landscape Gardening	4 days
Commercial Florists	6 days
Commercial Nurserymen	5 days
Canners' Short Course.....	3 days
Forestry	2 days
Poultry Breeders and Hatcherymen.....	5 days
Poultry Keepers	2 weeks
Poultry Feed Dealers.....	2 days
Farm Land Appraisers.....	3 days
Total Attendance, Year 1930-31.....	367
Total Attendance, Year 1931-32.....	253
Total for biennium.....	620

OTHER ACTIVITIES ON THE CAMPUS

Every year brings an increasing demand for conferences and other services to be rendered to groups that meet on the campus. In some cases these meetings result from the initiative of the faculty, and in others they are the result of

urgent requests from the outside. The following is a list of such meetings held during the biennium:

Kind of Meeting	Attendance	
	1930-31	1931-32
Farmers' Week	8,120	5,363
Grange Lecturers' Short Course	106	96
Extension Conferences	275	235
4-H Club Congress	480	359
Judging Contest for Vocational Students.....	1,780	1,750
4-H Club Picnics	4,000	4,000
Totals	14,761	11,803
Total for biennium		26,564

RESEARCH

The research program of the College has been seriously handicapped during the biennium by lack of financial support. The reduced budget of the University necessitated the dropping of a number of the staff members with the result that the time available for research was considerably curtailed. A glance through the departmental reports will show that the quality of the research has been maintained at a high level. The cooperative arrangement with the Experiment Station has materially strengthened our research program.

EXTENSION SERVICE

The annual report of the Extension Service for the calendar year 1931 has been presented to the President as required by law. In addition to those on the regular extension staff, each member of the resident teaching staff does a limited amount of extension work. The College feels that some extension work on the part of the resident teacher is desirable since it keeps him in touch with the thought of the man in the field. As the resident teachers widen their circle of acquaintances in the State, the demand for their help becomes more insistent, so that every teacher, whether he will or not, becomes in a way an extension worker, if his resident teaching is inspiring.

* * *

Department of Agricultural Chemistry

RESEARCH

J. F. Lyman, assisted by Miss LaVaughn Dennison, has devised a recipe for a cracker of exceptional food value as compared with the usual commercial crackers. It is hoped that this work will have the effect of bringing about a highly desirable improvement in food value of commercial crackers.

J. F. Lyman, with the aid of a grant of \$300 from the Graduate Council, made a comparison of the food value of whole-wheat flour and white flour, when each is used as a part of a mixed diet as in human nutrition. The results of this experiment have been published in "The Proceedings of the Society for Experimental Biology and Medicine."

R. C. Burrell has continued his research upon (1) The Composition of Pectin, and (2) The Hydroxy Fatty Acids of Seeds.

E. F. Almy has continued his research upon the determination of lactos in dairy products.

Dr. Powell has continued her studies on the metabolism of fats with a study of tricaprln. This work was made possible by a grant of \$75 from the Graduate Council for the purchase of the necessary tricaprln.

EXTENSION

J. F. Lyman has rewritten the extension bulletins on "Milk—Its Importance in Diet" and "The Vitamins." There is need for other bulletins similar to these upon such subjects as "The Function of Food," "The Minerals in Nutrition," "Food Values of Common Foods," "Recipes for Better Food Values," and others. If time permitted, I should like to try to prepare something along these lines for consideration by the Extension Service.

Dr. Powell has given practically all of her extra time this year to educational work in connection with welfare relief for the unemployed people of Columbus.

* * *

Department of Agricultural Education

The activities of the Department have been carried on by an abbreviated staff because of the absence of Professor L. E. Jackson during the Autumn and Winter quarters and of Professor H. G. Kenestrick during the Spring Quarter.

Additions to the offerings of graduate courses by the Department for the Summer Quarter of 1931 consisted of a course in Measurements in Agricultural Education by Professor Jackson.

For the Summer Quarter of 1931 an addition was made to the instructional staff in the person of Dean G. B. Gentry, State Supervisor of Agricultural Education in Connecticut. For the Summer Session of 1932 arrangements have been made for the services of Dr. Ralph H. Woods, of the Department of Agricultural Education of the University of Kentucky.

GUIDANCE OF STUDENTS

The policy of counseling with students has been continued with a view to planning their programs of instruction to include well-balanced technical instruction as well as a moderate amount of specialization in addition to the required professional courses. Each student electing a major in the Department has been required to determine at once a tentative program for the remainder of his college career. The tentative choices of courses and hours of scheduling may, of course, be changed for reasons adjudged adequate. This requirement of filing a definite program has tended to eliminate many difficulties in securing a well-balanced selection of courses, and in addition it has appeared to interest the students in building their programs to serve their needs to the best advantage.

THE TRAINING SCHOOLS

The programs of the critic teachers in the high schools used as training departments have maintained their former scope and have been strengthened in certain areas. The continued aim of these departments has been to provide the maximum amount of experience for the trainees in the various activities of the local programs.

We are unusually fortunate in the conditions under which our training departments operate. In no other state do the trainees have the opportunity to come into contact with five departments organized and operating under

practically normal rural conditions similar to those in which the trainee will work after securing employment.

In the supervision of the work in the training schools, Professor Jackson or Professor Stewart has spent from one to five afternoons each week observing the work of the students in training and of the critic teachers in developing the student teachers. The amount of time thus spent has varied with the demand from other duties in connection with the department and in the training of teachers in service. Group and individual conferences with the students have been held weekly throughout the year and conferences with the critic teachers less frequently for the purpose of checking on the training program and suggesting improvements.

TRAINING OF TEACHERS IN SERVICE

During the Autumn Quarter of the year 1930-31, Professor Jackson conducted the itinerant teacher-training work among the first-year teachers. During October and November he attended the district conferences of teachers of vocational agriculture, as scheduled by the State supervisors, and participated in the programs. During the second term of the Summer Quarter and the Autumn and Winter quarters of 1931-32, Professor Kenestrick acted as itinerant teacher trainer.

The annual conference was held at the Experiment Station each year with all members of the staff participating in the preparation of the program and in conducting the conference sessions. In these events the members of the supervisory staff cooperated. The assistance rendered by the members of the staff of the Experiment Station was greatly appreciated and extremely valuable in making the conference most helpful to the teachers. The major responsibilities incident to arranging for these contributions and scheduling them was assumed by Professor Kenestrick.

* * *

Department of Agricultural Engineering

The Department is indeed fortunate in not having to make a large investment in equipment for its class work. The manufacturers of farm implements are generous in their loans of equipment for the teaching and experimental work. The loan agreement which we have makes it possible to secure a large amount of equipment at no cost to the University whatever. This memorandum charge aggregated about \$30,000 to \$35,000 this year. The interest and depreciation is quite a factor each year, and it can be easily seen that the University is the beneficiary of a considerable sum of money in these charges which the manufacturers charge off as "Educational Work."

SPECIAL DONATION

Rural Electrification. The University has been made the beneficiary of \$18,600 from the East Central Division of the National Electric Light Association to conduct investigations of uses of electricity on Ohio farms and do extension work along lines of the uses of electricity on farms. This contract was for three years, and expires in July, 1933.

Mr. Blauser has spent a major portion of his time in the field in cooperative extension work with the county agricultural agents and the home demonstration agents and power companies. The most effective work has been done in the northeast and southwest areas of the state. Farm tours where groups of farmers visit farms on which electricity is used extensively have proved most satisfactory. There have been six tours conducted, the attendance ranging from 35 to 136 on the trip.

Mr. McCuen has been active as sub-chairman of the Rural Service Committee of the N.E.L.A. in helping utility companies establish what is termed a "Rural Market Survey." The object of using this system is to determine the potential market of equipment and possible uses of electric power on farms. The summer months were devoted to this work. To date ten systems have been established with the different companies in Ohio and every company in the Kentucky Utilities Company which operates in Kentucky.

The Department has manifested a great deal of interest in the Ohio Implement Dealers' Association over a period of years. This interest bore fruits in the Association's accepting the University's invitation to meet on the campus December 1931.

* * *

Department of Animal Husbandry

LIVESTOCK

The health of the horses, cattle, sheep and hogs has been generally good during the past year. Both the dairy and beef herds have passed 100 per cent the Tuberculin test and the blood test for Bang's Disease and will be fully accredited if the same is true another year. The greatest menace in the dairy herd the past year has been a mastitis infection which has seriously damaged some udders. It seems now to be under control. Other losses have been from foreign bodies in the stomach. Some calves have been lost, but this mortality has been reduced as have losses from parasites in pigs and lambs.

The inventory at the present time shows the following number of animals on hand:

Dairy Cattle	99
Beef Cattle	92
Horses	40
Sheep	184
Swine	219

RESEARCH

"The National Swine Record of Performance Project." This was inaugurated in the spring of 1930 and has been continued through one series of pigs by Messrs. Coffey and Wuichet.

Mr. Heizer has also continued his work on the "Inheritance of Coat Color in Horses," while the following new projects have been begun by members of the Staff:

"The Inheritance of an Udder Abnormality in Cattle." This study traced the inheritance of a new factor in cattle. Mr. Heizer.

"The Inheritance of an Hereditary Notch in the Ears of Jersey and Ayrshire Cattle." This paper will be submitted to the *Journal of Heredity* in June. Mr. Heizer.

"The Relation of Age, Frequency of Milking, and Number of Days in Milk, to Yearly Milk Production and Fat Percentage of Ayrshire Cows under Herd Test Conditions." Mr. Heizer.

"The Inheritance of Milk Production and Fat Percentage in Dairy Cattle." This study was begun in the summer of 1931 and it is planned to be ready for publication by September 1, 1932. Mr. Heizer.

"The Application of Progeny Tests to Determine the Transmitting Ability of Dairy Cattle." This planned to be ready for publication September 1, 1932. Mr. Heizer.

"The Application of Progeny Tests to Determine the Nature of the Inheritance of Speed and Gait in Race Horses." Mr. Heizer.

"The Effect of Ovarian Hormones as Determined by Ovariectomy of Sex-linked Crosses of Domestic Fowls." Mr. Heizer.

"The Effects of Corn Oil in the Ration of the Dairy Cow on the Production and Composition of Butterfat." Mr. Sutton.

"A Comparison of the Characteristic Butterfat Values of Butterfat from Four Different Breeds of Dairy Cattle on Similar Feeds." Paper to be presented before the American Dairy Science Association in June. Mr. Sutton.

"A Comparison of the Vitamin A and D content of Butterfat from Four Different Breeds of Dairy Cattle on Similar Feeds." Project, planned for a long-time experiment, has been in progress one year and five months. Mr. Sutton.

"The Effects of Vitamin A Deficiency on the Spinal Nerves." This project has been just recently started and will be worked out in cooperation with the Department of Anatomy. Mr. Sutton.

"Type and Litter Size in Swine." Mr. Roth.

"The Causes and Control of Beef Shrinkage." Mr. Stone.

"Carcaass, Wholesale and Retail Meat Cutting Tests." Mr. Stone.

PROJECTS IN PROGRESS BY GRADUATE STUDENTS

"The Effects of the Addition of Small Amounts of Iodine on the Rate of Bacterial Growth in Milk." Student, Mr. Bohn; Instructor, Mr. Sutton.

"The Effects of Feeding Iodine to Dairy Cattle on the Number and Ratio of Growth of Bacteria in Aseptically Drawn Milk from these Cattle." Student, Mr. Starbuck; Instructor, Mr. Sutton.

"Survey of Columbus Retail Meat Markets." Student, Pauline Trout; Instructor, Mr. Roth.

"Packer Sales Rooms Studies." Student, Mr. Sidner; Instructor, Mr. Roth.

"Study of Farm Slaughtering and Farm-Slaughtered Meats in Ohio." Student, Mr. Zielke; Instructor, Mr. Roth.

* * *

Department of Botany

During the years 1930-32 the Department of Botany has given instruction to 5,599 registrants distributed by colleges as follows:

	Agric.	Arts	Edu.	Com.	Pharm.	Eng.	Grad.	Total
1930-31.....	647	546	771	398	76	...	374	2,812
1931-32.....	631	515	756	387	62	8	428	2,787
Total.....	1,278	1,061	1,527	785	124	8	802	5,599

In the classes in General Botany there were 4,260 registrants distributed among the colleges as follows:

	Agric.	Arts	Edu.	Com.	Pharm.	Eng.	Grad.	Total
1930-31.....	552	452	685	398	76	...	6	2,169
1931-32.....	488	449	688	384	62	8	12	2,091
Total.....	1,040	901	1,373	782	138	8	18	4,260

The 1,339 registrations in the advanced courses were therefore as follows:

	Agric.	Arts	Edu.	Com.	Pharm.	Eng.	Grad.	Total
1930-31.....	95	94	86	...	...	...	368	643
1931-32.....	143	66	68	3	...	...	416	696
Total.....	238	160	154	3	...	...	784	1,339

DEPARTMENTAL ACTIVITIES

The statistics published elsewhere show very clearly the activities of the Department of Botany in so far as student enrollment and degrees are concerned. It is undoubtedly true that no two years of the Department's history have been quite so fruitful as these. Our staff is more competent to give the courses offered than at any previous time. Every member of the staff has been busy contributing to his special field, and bringing to the work of the group new suggestions and often new points of view.

The outstanding features of our biennium have been (1) the progress in the methods of teaching General Botany, (2) the improvements in laboratory and classroom methods in physiology, (3) more adequate and competent instruction in Morphology, Cytology, Anatomy, and Microtechnique, (4) a more adequate source of material and opportunity for research projects in the Botanic Garden, (5) a greater response of students to the advanced courses and graduate work, and (6) more competent and enlightened extension service.

GENERAL BOTANY

Under the supervision of Dr. Sampson the staff has as usual given thought to certain perennial problems and has made definite progress in the following items of good teaching.

1. Consistent scientific point of view in interpreting biological phenomena.
2. Objectives—having in mind the "general service" character of the course.
3. Methods of teaching most effective in attaining these objectives.
4. Critical selection of most appropriate subject matter in view of our objectives.
5. Most effective order of presenting subject matter.
6. Methods of measuring the degree of our success in attaining objectives, and
7. Accumulation of desirable materials, microslides, lantern slides and demonstration set-ups, plants.

* * *

THE NEW ADDITIONS TO THE BUILDING

Attention should be called at this time to the very great improvements in our laboratory facilities which resulted from the remodeling of the building. The work in physiology and morphology has been particularly facilitated. The former has its student space more than doubled, and the latter moved from no regular laboratory to two well-equipped rooms. This also enabled us to provide a permanent place for the microchemistry, for the work with the algae,

and for ecology. All of these courses had previously been shifted from one room to another depending on registrations and programs.

BOTANIC GARDEN

The second greatest step forward in the history of the last fifteen years has been the gradual shaping up of the Botanic Garden and the recent enlargement of its boundaries. It has already contributed much to our class work and field studies. Over 5,000 specimens representing more than 600 species of plants—mostly shrubs and trees—have been planted. By next year we believe that there will be enough shade to start the representative ferns and perennial flowering plants, and we hope to increase our available species to more than a thousand.

On the side of research the Garden has furnished much plant material for the entomologists working on the Mexican Bean Beetle. It has provided space for work on the effects of nitrogen on the growth of tree seedlings (in co-operation with the Forest Experiment Station); for a study of the anatomy of hemp and the changes accompanying sex reversal; for studies on better control of "fire blight"; Mr. Waller has bred a promising new race of early spring Iris, which pushes forward the flowering period about one month; there also has been produced the finest lot of Hibiscus hybrids in cultivation with improved flowers, foliage, and general ornamental effects.

RESEARCH ACTIVITIES OF THE STAFF

Reports have been received from all members of the Department and the material contained in these individual reports is so voluminous that it should not continue to be detailed in these reports. For the future this may be best presented by the list of publications, and the thesis projects. Various members of the Department have taken part in the national botanical organizations, are acting as associate editors of various journals, and are continuing to support State and local groups for the advancement of science.

* * *

Department of Dairy Technology

COMMERCIAL WORK

The manufacture and sale of dairy products in the dairy laboratory is operated for the benefit of the students majoring in this work. All employees in the laboratory are Dairy Technology students with the exception of the foreman.

About two thousand pounds of milk are purchased daily from the University herd and six other dairy farms. Cream for churning purposes is purchased from about twenty-five dairy farms. On account of our laboratory needs during the Winter Quarter, we purchased in addition from two hundred to five hundred pounds of milk each laboratory day from one of the Columbus plants.

TEACHING ACTIVITIES

The enrollment for students majoring in Dairy Technology was larger during the Fall Quarter of 1931 than it has ever been. There were seven graduate students, nine seniors, ten juniors, eighteen sophomores, and twenty-

two freshmen, making a total of sixty-six students enrolled in the University who were majoring in Dairy Technology.

Mr. H. R. Lochry, Dairy Manufacturing Specialist, of the United States Department of Agriculture, has been assisting us during the Winter Quarter in the teaching and research in the manufacture of cheese. He is assigned to Sugar Creek, Ohio, and during six weeks of the winter very few cheese factories are making cheese, so that the United States Department of Agriculture loans him to us, and we pay his living expenses while in Columbus.

RESEARCH

We have continued the plan which we reported in the last annual report of cooperating with the various dairy products industries of the State.

The four state associations of milk, butter, ice cream, and Swiss cheese have each appointed an advisory research committee. The members of our department have met with each committee and discussed as to what is the most important problem to be investigated.

We have also cooperated with the Dairy Department at the Ohio Agricultural Experiment Station on two projects this past year: "Feeding Raw and Pasteurized Milk" and "Making Butter and Swiss Cheese from two Groups of Cows, One Fed Wheat and the Other Fed Corn."

* * *

EXTENSION SERVICE

The extension work of the Department of Dairy Technology is carried on with the milk producers, manufacturers of dairy products, and other groups or organizations of people interested in the dairy industry either in promoting the consumption of milk products from a health standpoint or improving the quality of dairy products from a health standpoint. Although we have but one specialist, all of the men in the Department devote a part of their time in making contacts with men of the industry and carrying on scoring and analytical work. Most of our extension work deals with the manufacturers and distributors of dairy products. A detailed account of the extension work of this department will be found in the Annual Report of the Extension Service.

SCHOLARSHIPS

In order to induce more students, especially from cities, to specialize in Dairy Technology, the following men offered \$400 scholarships in the spring of 1930 to high-school graduates in their respective cities:

Mr. Everett Antrim, The Furnas Ice Cream Company, Columbus, Ohio.

Mr. John Schubach, Sanitary Milk Company, Canton, Ohio.

Mr. Henry Page, The Page Dairy Company, Toledo, Ohio.

None of the applicants qualified scholastically.

In the spring of 1931 there were four scholarships offered as follows:

Mr. Everett Antrim, The Furnas Ice Cream Company, Columbus, Ohio.

Mr. Henry Page, The Page Dairy Company, Toledo, Ohio.

Mr. L. A. Bletzer, Noaker Ice Cream Company, Canton, Ohio.

Mr. F. J. Andre, Telling-Belle Vernon Company, Cleveland, Ohio.

There were forty-six boys who took this examination in four cities. These scholarships were granted, and the boys are now enrolled. We have not asked anyone to offer scholarships this spring because we are waiting to determine

whether those which are now under operation will work out satisfactorily. Several boys who did not win the scholarships but took the examination are now enrolled in our department.

* * *

Department of Farm Crops

In the last two years more than the usual amount of experimenting has been done with teaching methods, especially in Course 401 in an effort to improve the effectiveness of teaching. The effort has been to stimulate interest by setting problems of a practical farm nature to solve which the student must make use of the information secured in this and previous courses. An earnest effort has been made also to cooperate with other departments of the College in helping students to improve their use of English.

RESEARCH

Each member of the teaching staff is also a member of the staff of the Agronomy Department of the Agricultural Experiment Station. Under this plan the research in Farm Crops for the State is closely coordinated. State-wide responsibility for each project is centralized in one man, who is responsible to the Chief of the Agronomy Department of the Experiment Station for that work. Projects are distributed among members of the Wooster and Columbus staffs as seem most effective.

The list of projects is too long to include here and it is available elsewhere.

Research accomplishments are indicated in part by the list of publications included later in this report.

From his experiments on weed control Dr. Willard has worked out a definite and practical system by which small patches of Canada thistle and quack grass can be eradicated in a single season.

After several years of work on the time of cutting alfalfa, definite conclusions have been reached and given to the public with practical recommendations. From this work has come a theoretical explanation of why we have more trouble keeping stands of alfalfa in Ohio than they have in the western states. The drought of 1930 provided conditions that made this discovery possible.

As a result of Dr. Borst's work in oats breeding, a new variety of oats, named Franklin, was released to the farmers in the spring of 1931. It produces a higher yield and has a stiffer straw than any commercial variety in the region to which it is adapted.

EXTENSION

Efficiency, economy, and satisfaction in agricultural production are primarily dependent upon a low cost of unit production of the farm crops adapted to the agriculture of the state. The extension work in Farm Crops brings to farmers of Ohio the facts and factors established by experience and experimentation, that are concerned with efficient crop production. Such information is made available to farmers and farm organizations through field demonstrations, meetings, lectures, the press, the radio, correspondence, publications, leader training, and conferences. These activities call for contact and co-operation with many organizations of producers, distributors, and consumers.

A detailed account of the extension work of the Department will be found in the annual report of the Extension Service.

* * *

HOME MANAGEMENT DIVISION

As recorded in the report of the School of Home Economics for the year ending June, 1930, the Household Management Division, as it was then called, suffered serious loss through the illness and death of Professor Grace Graham Walker. The problem of finding a successor to Mrs. Walker was not an easy one. It was with great satisfaction that the services of Miss Ruth Lindquist were secured. She was appointed with the rank of associate professor, and assumed the duties of chairman of the Division of Home Management, as it is now called, in January, 1931.

The new two-family home-management house, consisting of the South Residence and the West Residence, at 220 and 222 East Eleventh Avenue, is the greatest acquisition in physical equipment of the School of Home Economics since the erection of Campbell Hall in 1916. The foundation for the new house was laid in the fall of 1930, and on November 7, 1931, the house was opened to the first group of students who were to use it as a residence and at the same time as a laboratory in home management.

At the meeting of the Board of Trustees of the University on May 9, 1932, the following action was taken in accordance with a recommendation from the School of Home Economics: "That the new home-management house, under the direction of the School of Home Economics, be named the Grace Graham Walker House in memory of the late Professor Grace Walker, who was a member of the faculty of the School of Home Economics from 1913 until the time of her death in April, 1930."

A central goal of the Division is the linking of home-management courses at The Ohio State University with successful and satisfying family life. To this end there is a definite interest in providing for students opportunities, other than the new home-management house, for observation of the application of principles of home management and for participation in the application when possible and feasible. In the spring of 1931, each of four of the superior seniors lived throughout a period of one-half the quarter as a self-supporting older daughter with a successful family selected by faculty members of the School of Home Economics, and interested in cooperating in such a project. To the cooperating families, the four students, and to the faculty of the Division of Home Management the experiment seemed so successful that the plan is now being incorporated as a type of home-management experience to be provided for selected students. Another project now under way is the observation of families in which occur juvenile delinquency or other difficulties called to the attention of the Court of Domestic Relations. In this type of experience the student observes the part which good management has in furthering satisfying family life and may help the social worker in rehabilitation of families.

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RESEARCH

The project, "A Study of Certain Cash Expenditures of Ohio Farm Families," on which Miss Grace Brinton had been working as a member of the staff of the Ohio Agricultural Experiment Station, has been completed.

The following projects have been carried on by Miss Marion Griffith, who is part-time instructor in the School of Home Economics and part-time assistant in Home Economics, Ohio Agricultural Experiment Station:

1. Influence of Laundering and Exposure to Light upon Wash Silks Used for Outer Garments. Completed. Report published as Bulletin (in press) of the Ohio Agricultural Experiment Station.
2. Influence of Position Isomerism in Azo Dyes on Their Fastness to Light and Washing. In progress.

The following projects have been carried on under the direction of Miss Hughina McKay, who is part-time Professor in Home Economics, The Ohio State University, and part-time Associate in Home Economics, Ohio Agricultural Experiment Station.

1. Basal Metabolism of Young Women. Completed. Report published as Bulletin No. 465 of the Ohio Agricultural Experiment Station.
2. Seasonal Variations in the Growth of Pre-School Children in Ohio. Completed. Report published as Bulletin No. 482 of the Ohio Agricultural Experiment Station.
3. Foods Used by Rural Families in Ohio during a Three-Year Period. Completed. Report published as Bulletin (in press) of the Ohio Agricultural Experiment Station.
4. Color, Consistency, and Flavor of Ohio Potatoes Which Have Been Produced Under Different Conditions and Boiled for Table Use. In progress.
5. A Study of the Food Habits and Physical Development of Pre-School Children over a Two-Year Period with Special Reference to Seasonal Variations in Growth. In progress.
6. Basal Metabolism of Women over Thirty-Five Years of Age. In progress.

Department of Horticulture and Forestry

The activities of this department have increased considerably during the past two years, particularly as regards outside contacts and assistance to the various industries represented in its field. There has been a notable increase in the number of organizations that meet in our building and look to the Department for leadership in this work. This is largely due to the type of experimental work which is in progress as well as to the activities of the staff in these matters.

CHANGES AND ADDITIONS IN CURRICULUM

A few additions have been made to the courses offered in the Department. A new course in advanced plant propagation aims to acquaint the student with the more scientific and recent developments in this field. A course in arrangement and planting of gardens and small properties is designed to equip the student of modern nursery practice with the fundamentals of good landscape gardening. In addition, one on ornamental plants, which was badly needed by both the student of floriculture and nursery, covers the field of woody plants, particularly the evergreens, in a comprehensive manner. A course in Arboriculture, formerly taught in the Division of Forestry was transferred to the Division of Ornamental Horticulture. A Horticultural Seminary has also been added for the benefit of graduate students and the staff. In Forestry a new course on Artificial Forest Regeneration has been added as one particularly adapted to a state like Ohio. Two courses were dropped from the curriculum, namely, one on Lumber and one on Forestry and Conservation because the material was covered elsewhere.

The Forestry curriculum has been revised during the past year to give a broader training in the exact and biological sciences so necessary as a foundation for the future forestry training which must be obtained by Ohio students at institutions outside the state. There has, of course, been some fluctuation in the number of forestry majors in registration, and during the past two quarters seven students have found it necessary to drop from the University for financial or other reasons. However, this number has been offset by fifteen new registrations during the Winter and Spring quarters of 1931-1932. Although the two-year forestry curriculum as outlined in the catalogue is proving satisfactory, since students are finding it possible to continue standard four-year forestry courses without interruption at regular forestry schools, there has arisen among the students a feeling that Ohio State University should furnish them with four years of training leading to the B.S. in Forestry degree.

RESEARCH

For this purpose research and experimental work may be classed together. While much of this work is under the direction of the Experiment Station, it is not all financed from that source and the College department is reaping a large benefit as a result of the work. The following projects are yielding both practical and scientific contributions in the field of horticulture.

Use of electric light in the greenhouses to bring about earlier flowering of certain commercial crops. This work has received attention over the country by commercial florists and it represents a new element in the forcing-house industry, because of the practical application that has been made.

Likewise, the use of shades to force chrysanthemums and other "short-day" plants into earlier bloom. This work has had a splendid response among commercial florists, many of whom are already putting this work into practice.

Other projects with flowers include: Organic matter mulches with snapdragons, Russian statice, stocks, and calendulas, etherization and bottom heat for forcing gladiolus in the greenhouse, soil reaction studies with the commonly grown greenhouse plants, propagation of evergreens and woody plants, rose grafting in relation to congenial stocks, and fertilization of trees and shrubs.

Research work with vegetables both under glass and out of doors has been greatly extended during this biennium.

A study of water relations and root development of vegetables, particularly the tomato, has been made by a graduate student. In addition to results of a scientific character, there is evidence at the present time that the serious trouble known as "blossom and rot" of tomatoes has been pretty well solved so far as greenhouse culture is concerned. This will be one of the most revolutionary changes in the growing of this crop that has come to our notice in many years.

Studies with kraut cabbage have been carried on by a graduate student. The findings of this work indicate a new approach to the problem of fertilizer and soil studies. The data show a striking response of the relation of soil factors to the successful growth of this crop. The particular points are the value of the soil type and soil preparation, the moisture relations before and after planting, and the soil reaction. Fertilizers were of small importance in comparison with these factors.

Other projects are: Studies of starvation symptoms in vegetables; soluble salts as a greenhouse soil problem; fertilizer requirements of vegetables; a study of morphology of lima bean; and apple cider manufacture.

Since the acquisition of the Coe woods by the University and its administration by the Division of Forestry, several research projects covering long periods of time have been initiated. A small area of seedbeds has also been made available for research and class laboratories in forest nursery practice. The following projects have been initiated, and records are to be taken regularly by forestry classes:

1. The natural rehabilitation of grazed Ohio farm woodlots.
2. Tests of forest species, spacing, mixtures and planting technique on limestone soils.
3. Studies on the germination of tulip poplar seed.
4. Tests on species in pure arboretum plantations.
5. A study of the use of cyanamide to check damping off in the forestry nursery.

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Department of Poultry Husbandry

ACTIVITIES OF THE INSTRUCTIONAL STAFF

Mr. Winter is continuing his studies in the University in biology during the Summer Quarter. In 1931 he spent the summer in Columbus in research work and attended the necessary details of the Department.

Mr. Dakan spent the summer of 1930 in research and administrative duties at the University. In 1931 he attended the summer session of the University of Wisconsin. He will attend the University of Michigan this summer, 1932.

The off-campus activities and on-campus activities other than teaching of both Mr. Winter and Mr. Dakan are increasing from year to year. State and national agencies call for advice and assistance. This frequently calls for trips away from the campus over week-ends and over night. Visitors to the poultry offices from out of town consume much time. I doubt whether a department of poultry husbandry could afford to reduce the time so spent. After all, we serve an industry quite as much as we serve the students in our class rooms.

Much research work has been carried forward, covering especially

1. A comparison of battery and range systems of brooding.
2. Protein levels for maturing pullets.
3. A comparison of methods of feeding laying hens.
4. Cod-liver oil for layers given sunshine.
5. Wet-mash feeding.
6. The feeding value of different forms of milk for poultry.
7. Transmission of ultra-violet light through window glass.

There have been numerous publications by members of the staff.

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Department of Rural Economics

CHANGES AND ADDITIONS IN CURRICULUM AND TEACHING

There were no additions or changes in the curriculum during the two years. The Fruit and Vegetable Marketing Course was given for the first time in the spring of 1931. The enrollment was not as large as had been hoped for. It developed, however, that this was due to schedule conflicts which have been adjusted for the coming year. During the year 1930-1931, Dr. E. D. Tetreau

taught the courses in Rural Sociology while Mr. Lively was on leave of absence at the University of Minnesota. Mr. Lively returned on October 1, 1931.

In February of 1932 a two-day short course for Land Appraisers was given. There was an attendance of twenty-eight people. While this number was not large, it represented the larger institutions which are loaning money on farm land in Ohio. The course will be repeated next year.

RESEARCH

New research projects undertaken during 1930-31 and 1931-32:

1. The Expenditure of Public Funds by Local Units of Government in Eleven Ohio Counties. One mimeographed report has already been published on the results of this study. The study is being continued.
2. Land Utilization in Lawrence County, Ohio. This study is similar to that carried on in Vinton County, Ohio. It deals with the problem of marginal lands in Ohio.
3. Farm Mortgage Indebtedness in Ohio. The aim of this study is to determine the extent of farm mortgage indebtedness in Ohio, the source of mortgage loans, the rate charged, and the length of time which mortgages run.
4. Market Milk Areas in Ohio. A study of the supply of milk present and potential which is available to the various Ohio markets. This study was undertaken at the request of the Ohio Milk Producers' Council.
5. A Business Analysis of Several County Livestock Shippers' Associations. This series of studies was undertaken at the suggestion of the Ohio Livestock Cooperative Association and at the request of the several individual county associations. The analysis has been completed for four associations, others are in progress.
6. The Truck as a Factor in Livestock Marketing. This study was undertaken at the request of several interested groups, including shippers, haulers, and buyers.
7. Organization Trends in Fairfield County. A study of the changes which are going on in the organization set-up of Fairfield County. This study was undertaken at the suggestion of the Extension Service, which is vitally interested in the development of a technique for the making of such studies.
8. Rural Ohio's interest in the Old-Age Pensions. This study was undertaken in anticipation of the coming interest in this subject.
9. The Costs of Sheep and Wool Production in Southeastern Ohio. This study was initiated in the spring of 1930 to continue for three years. The project is in cooperation with Pennsylvania State College and the University of West Virginia. The project was undertaken at the request of the Tri-State Sheep and Wool Growers' Association.

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The foregoing list of publications will indicate that the research work of the Department has progressed. One of the pleasing features of the research work has been the keenness with which the results have been taken up by those concerned. Not only are these results available in published form, but the research work is developing a group of men who have an intimate knowledge of the problems studied. The demand upon the time of these men for consultation and conferences following studies is becoming so great that one of our major problems is to properly reserve their time for further research. A typical example of this is that of Mr. McBride who has recently completed a study of Milk Buying Plans. The present disorganized condition of the milk market has interested nearly every market in Ohio in this problem. The result is that calls upon Mr. McBride's time for consultation or arbitration relating to the problems of particular milk markets have become so numerous that they

threaten to interfere with the research program. A considerable portion of the research initiated during the past two years has dealt with current problems such as that of marketing, taxation, or credit. Limitation of funds has prevented more adequately meeting the demands.

Much of the research work of the Department is in the fields of vital interest to the agricultural organizations of the State, such as the Ohio Co-operative Livestock Producers' Associations, the Ohio Dairy Council, the Ohio State Grange, and the Ohio Farm Bureau Federation. The eagerness of these organizations, which comprise among their membership over one-half of the farmers of the State, to support the research work of the Department has been a source of much gratification.

EXTENSION

Never has there been such a large demand on the time of the Extension staff. The timely economic information project has expanded beyond expectations. Seven thousand copies of the publication, "Timely Economic Information for Ohio Farmers," are now issued monthly. Over 250 meetings were held last year on this project alone. As mentioned above, the demands upon the time of the marketing extension workers has been far beyond their ability to meet. Urgent demand has necessitated that some consideration be given to the taxation problem. Mr. Wallace has, therefore, given some of his time to this subject. In the field of Rural Sociology, Mr. Tom and Mr. Smith have been able to meet only the most urgent demands. The teaching and research staff has been called upon to give more or less of their time to extension problems. After a piece of research has been completed, there is a demand that the results be presented and interpreted to those directly concerned.

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Department of Soils

GRADUATE INSTRUCTION

A gratifying increase in the number of graduate students majoring in the Department has occurred during the biennium. Since July 1, 1930, two men have been granted the degree of Master of Science and three men the degree of Doctor of Philosophy. At the present time ten men are engaged in work towards the doctorate degree. Of these, two have met all requirements except thesis and final examination and will probably complete their work by the end of the coming Summer Quarter. The Department has recently been awarded a graduate fellowship by the DuPont de Nemours Corporation for work in soil chemistry during the year 1932-33. One man has been awarded a university scholarship for major work in Soils during the coming year.

RESEARCH

The research work of the Department may properly be classified into (1) departmental projects, (2) personal projects of individual staff members, and (3) graduate student projects. The first two groups are, for the most part, carried on under the cooperative arrangement with the Experiment Station and are largely financed by that institution.

Departmental Projects

A number of field projects, supplemented by sub-projects of a laboratory nature have been in progress. These projects are supervised by the chairman

of the department. The field work is directed by Mr. Thrash and the supplementary laboratory studies by Messrs. Bradfield and McClure. The following list comprises the more important projects in this group:

1. A comparison of different legumes as sources of nitrogen for crops in rotation.
2. Comparisons of various times and methods of applying manure to the crop rotation.
3. Rock phosphate as a source of phosphorus for crops, with and without animal manures and sweet-clover green manure.
4. The potash needs of alfalfa as related to the lime supply.
5. The influence of increasing amounts of sulfate of ammonia upon the yield, protein content, and quality of timothy when cut for hay at different stages.
6. A study of the effects of increasing amounts of superphosphate upon the yield of crops in rotation and upon soil composition.
7. A study of various placements of fertilizer in the hill for corn.

Each member of the staff has been engaged on a number of studies carried on individually for the most part. Graduate students have also been carrying forward projects of various kinds, and many publications by the various members of the Department have been issued.

* * *

The Franz Theodore Stone Laboratory

The formal work of the Franz Theodore Stone Laboratory at Put-in-Bay, Ohio, is limited to the period of the Summer Quarter, though some investigations are carried on at other seasons of the year. For the past two summers, 1930 and 1931, the Laboratory has had a full attendance, 40 to 45 students being about our maximum, according to the personnel of the student body and the nature of the research undertaken. Only graduate students have been admitted for the past two years, together with independent research workers who do not desire university credit. Research men naturally require more space than students in courses. In general our work does not duplicate work done on the University Campus, but is intended to supplement this, and the outdoor phases of biological work are especially stressed.

The Laboratory offers an excellent opportunity for younger graduate students to begin research under competent direction, as well as for those who are more advanced to conduct research leading to higher degrees. The region about Put-in-Bay is very rich in biological material, especially for problems dealing with aquatic life.

We have been able to cooperate very satisfactorily with both the State Division of Conservation and the United States Bureau of Fisheries on problems dealing with the fisheries of Lake Erie. As a matter of fact, the important cooperative work on the fisheries of Lake Erie and the limiting factors in fish production was suggested and initiated and for some time carried on under the supervision of the Director of the Laboratory. This work is now being rounded up for publication as a report of the U. S. Bureau of Fisheries.

SCHOLARSHIPS

For the past five years the Central Ohio Anglers' and Hunters' Club has provided a scholarship at the Laboratory, the selection of the candidate being left to the judgment of the Director. The purpose of the scholarship is to

encourage young men of high qualifications in the study of the problems of conservation. The men who have profited by the scholarship thus far are:

W. M. Tidd, now Instructor in Zoology, Ohio State University.
E. N. Warner, now Instructor in Zoology, Ohio State University.
J. W. Howland, now Instructor in Zoology, St. Lawrence University.
P. J. Seyler, now Graduate Assistant in Zoology, Ohio State University.
W. W. Grimm, now Assistant in Zoology, Miami University.

All of the above men have been employed in research for the State Conservation Division for one or more summers, and Mr. Tidd spent two years in the work of the Lake Erie Fisheries Survey. Apparently the scholarship has brought excellent results. The scholarship will be offered again during the summer of 1932.

Western Reserve University, for the past two summers, has also provided a scholarship fund which has been divided in the support of several students. It has been our hope that other colleges and universities within the State might become interested in providing scholarships for their promising students in biology. Perhaps it would be well if Ohio State University could offer one or more scholarships on a competitive basis, open to students generally.

NATURE OF WORK

Graduate course work is carried on at the Laboratory for only the first term of the Summer Quarter, after which students all pursue individual problems under the direction of one or more professors. The work in course is highly concentrated—a student takes only two courses and each course occupies three full days a week. On problem work the students spend all of the time in research. As there are very few distractions of any kind, our students accomplish considerably more work than they do at the University in the same length of time.

The research spirit of the Laboratory is excellent, and it has been further enhanced by visiting investigators from many other institutions for longer or shorter periods. Many masters' and doctors' degrees have been granted by the University for work begun and sometimes completed at the Laboratory.

LIBRARY

We have been able to accumulate a considerable number of scientific publications, especially of government and state bulletins and author's reprints. Some of the standard reference books and other works are filed in the library, but many of our needs must still be met by shipment from the University Library. This is not advisable, as the packing and shipping of books is necessarily injurious to them, and it is hoped that some provision may be made in the future to provide for all the necessary works to be permanently deposited in the library of the Laboratory.

The excellent work of our librarian, Mrs. Ethel Miller, for the past two summers has made the library much more useful, as she has cataloged and filed scientifically all the separate papers. She has also been able, through correspondence, to complete the files of numerous series of publications.

PUBLICATIONS

Four special papers have been issued as "Contributions from the Franz Theodore Stone Laboratory" and published by the University. These have been widely distributed and serve not only to advertise the nature of the work

at the Laboratory, but also to bring in valuable publications in exchange. Two other contributions are now ready for publication and it is hoped that we may be able to issue them in a short time.

* * *

Department of Zoology and Entomology

The graduate work, so much of which is personal instruction and which necessitates rather small classes, has increased nearly 10 per cent and continues to tax our ability to handle it, in spite of the fact that some of the younger members of the staff, notably Drs. Price and D. F. Miller, have been able to accept some of this work. Dr. L. H. Snyder was added to the staff in the autumn of 1930, for work in Genetics, but no sooner was it known that he would give advanced work than his time became fully occupied in this field. At the same time his beginning course in Heredity has almost doubled in numbers.

Our graduate work is a matter of pride to us. To the present date, 71 doctorates and more than 200 masters' degrees have been granted for work done in this Department, all but seven of the doctors completing their work within the past ten years. All of them are giving splendid service, thirty-five teaching in colleges and universities and the rest holding positions of responsibility in research work for the Government, in various state departments, and in special institutions of research. These men, going out with the highest training we can give them, are naturally capable of rendering the highest service in specialized fields. Hence this type of work in the University should be encouraged to the limit of our capacity, especially as the other colleges of the state are not equipped for this type of teaching.

* * *

RESEARCH

Professor R. C. Osburn has directed the work of a number of candidates for the doctorate. As Director of the Franz Theodore Stone Laboratory, he has been chiefly responsible for the program of work there and for the direction of most of the research. He has collaborated with the Division of Conservation in the preparation of a comprehensive report of the fishes of Ohio, which, it is hoped, may be ready for publication within another year. Also he has carried on investigations on the Bryozoa (a marine group of animals) for the U. S. Bureau of Fisheries, the American Museum of Natural History, and the Canadian Biological Survey. All of this work has been done in spare time and without additional remuneration.

Professor Herbert Osborn has continued his life work on certain groups of economic insects, especially the Hemiptera, and has directed the work of a number of candidates for the doctorate in entomology. The research work of the Ohio Biological Survey has also been under his direction. He has also collaborated or advised in the research work of the Tropical Plant Research Foundation and various other scientific organizations.

Professor W. M. Barrows has given much time to the reorganization of the teaching in elementary courses in Zoology. This has involved a large amount of research into methods and materials applicable to such courses. He has directed the work of a number of students on the reactions or behavior of animals, and his graduate students have contributed some interesting results. He has also continued his studies on the spiders, in which group he is an authority.

Professor D. M. DeLong's research field is that of economic entomology, especially of the very important group of leafhoppers. He is a collaborator with the U. S. Bureau of Entomology and has cooperated in the study of field projects during his summer vacations. Professor DeLong has also had charge of the work of a number of graduate students, and the results of some of this work have been published.

Professor Alvah Peterson, in addition to the direction of the work of various graduate students, has carried on research in the field of biological control of insect pests, especially of insect parasites and predators. In some of this work he has collaborated with the U. S. Bureau of Entomology, especially in conducting research on parasites of the destructive Mexican bean beetle. Some of the problems which Professor Peterson is now working on are as follows: "The Production of Artificial Media for Rearing Parasitic Insects, particularly *Trichogramma Minutum*"; "Some Biological Aspects of Microbracon Hebertor, an Important Parasite of Lepidoptera Infesting Stored Grain"; "The Development of Apparatus Suitable for the Determination of Relative Humidity in Small Space"; "The Insect Enemies of Some of the Common Insects Infesting Various Wild Plants, Particularly Weeds."

Professor C. H. Kennedy has conducted research on insect biology and has directed the study of several graduate students on the nature of the internal organisms of insects. This work, of course, has a direct relationship to the food and, therefore, to the economic importance of insects. Along this line he has prepared a laboratory manual of 90 pages and index on "Methods for the Study of the Internal Anatomy of Insects." He has also given considerable time to the study of the ants of the State, especially of their ecology, community habits, and economic importance.

Professor L. H. Snyder has been added to the staff since the last report was made. Besides individual research on problems in Heredity, he has been cooperating with the Department of Medical and Surgical Research on the nature of inheritance of blood groups in man. His book on the "Inheritance of Blood Groups from the Clinical and Legal Standpoint" is the standard book in this field. Research under way in Genetics includes: a comprehensive investigation of the inheritance of human characters including anatomical abnormalities, mental qualities and special abilities, pathological disturbances and disease susceptibilities, and physiological conditions (blood characters, taste deficiencies, etc.). Special care is being given to linkage relationships with a view of predicting when a child is born its physiological and pathological potentialities.

Professor W. J. Kostir is continuing his research on the physiology and ecology of the Protozoa, with special reference to the influence of chemical factors on the environment. He is also cooperating with the State Division of Conservation in a study of Protozoan parasites of fishes in the attempt to solve certain practical problems of fish diseases. In addition he has conducted the research of a number of graduate students.

Professor D. F. Miller has collaborated with Professor Barrows on research in the methods of teaching elementary zoology. He is also cooperating with the Department of Medical and Surgical Research and the Department of Orthopaedic Surgery of the College of Medicine on the treatment of Osteomyelitis with blowfly larvae. This work consists of the rearing and maintaining of blowfly cultures and numerous problems connected with improving the productivity and rearing technique, as well as the study of enzymes and

secretions produced by larvae and their effects upon bacterial cultures and upon wound healing. The particular tests are made on clinical cases at the University Hospital and the Children's Hospital.

Professor John W. Price has continued his studies on the embryology of the white fish, comparative rate of growth in fishes, and the relation of gill surface to respiration. He has also cooperated with Professor Barrows and Professor D. F. Miller on the educational research work of the Department.

Dr. W. E. Dunham has continued his active work in experimental apiculture and the study of bees in relation to pollination of economic plants. Research problems under way are as follows: "The Alimentary Canal of the Carpenter Bee"; "Studies on Flight Activities of Different Types of Colonies of Bees during Fruit Bloom"; "The Rôle of the Honeybee in Red Clover Pollination" (in collaboration with the Bee Culture Laboratory of the U. S. Bureau of Entomology).

Mr. John A. Miller has devoted his research time to a study of the behavior of the leech. This work may also have some economic bearing.

Mr. J. N. Miller has devoted his research time especially to a study of the life history of a Trematode worm parasitic in snails and rodents.

Mr. E. N. Warner has made a study of the factors necessary to the maintenance of marine aquaria in inland laboratories and methods and apparatus for artificial aeration of aquaria.

Mr. Donald J. Borrer has continued his work on the Dragon Flies of Ohio, preparatory to revising the list of Ohio species, also studies on the activities of dragon flies, and on a monograph of the genus *Erythrodiplax*.

Mr. W. M. Tidd has continued his work on the copepods parasitic on fishes in the State.

Other instructors, assistants and graduate students have all been working on research problems of various kinds and many shorter papers have been published as a result of this work.

* * *

ALFRED VIVIAN, *Dean*.

COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences has enjoyed during the past two years a reasonable degree of progress. There has been a fine spirit and morale on the part of both students and faculty. Even the discouraging effects of the general economic depression have not dimmed our faith in the supreme value of a liberal education; indeed, we feel that with material values so generally deflated, this is above all others the time to reassert the supreme importance of those qualities of mind and spirit which are the marks of the liberally educated man or woman. The past biennium has seen distinct advance in a number of respects in the work of the College. Our teaching is more effective; we have greatly improved the methods of advice and consultation by which we seek to aid our students to make the most of university opportunities; our programs of research have been carried steadily forward; and our general services by voice and pen to the community at large have expanded. In spite of all the difficulties incident to reduced appropriations, and the necessity for financial retrenchment, this progress must steadily proceed during the years ahead of us.

ENROLLMENT

The enrollment in the College for each of the four quarters, with the voluntary withdrawals, for the two years of the biennium was as follows:

1930-31					
	Summer	Autumn	Winter	Spring	Total
Arts	460	2,144	2,011	1,883	6,498
Arts-Education	26	57	55	55	193
Total	486	2,201	2,066	1,938	6,691
Withdrawals—Men	9	49	40	23	121
Withdrawals—Women ...	2	10	17	12	41
Totals	11	59	57	35	162

1931-32					
	Summer	Autumn	Winter	Spring	Total
Arts	458	2,087	1,932	1,783	6,260
Arts-Education	24	51	50	52	177
Total	482	2,138	1,982	1,835	6,437
Withdrawals—Men	13	26	20	18	77
Withdrawals—Women ...	4	13	20	10	47
Total	17	39	40	28	124

The total enrollment during a period of years shows a small but steady decrease. For the past four years the numbers are as follows:

1928-29	7,460
1929-30	6,932
1930-31	6,691
1931-32	6,437

In four years the loss has been 13.7 per cent. A study of enrollment figures by classes would show that this loss has been entirely in the freshman and sophomore years. The shift in enrollment to the upper-class years and to the

graduate and professional schools is one of the marked tendencies in the University. This suggests definitely that increasing numbers of students pursue the earlier years of their college education in the smaller colleges of the state and come to the University for their advanced work.

The time has come when we should give increasing attention to the upper reaches of our university work. The results of the effort of the past few years to improve the teaching in the early years, and to aid freshmen and sophomores in making their adjustment to the University have been noteworthy. The emphasis should now be placed on the work in the later years of college and university life.

DEGREES

The total number graduating during the year 1930-31 was 412, distributed as follows:

	Summer	Autumn	Winter	Spring	Total
B.A.	59	43	50	243	395
B.S.	0	0	1	16	17
Total.....	59	43	51	259	412

The total number graduating during the year 1931-32 was 407, distributed as follows:

	Summer	Autumn	Winter	Spring	Total
B.A.	53	36	46	253	388
B.S.	0	0	0	19	19
Total.....	53	36	46	272	407

These totals should be compared with the number graduating in 1928-29 and 1929-30. In 1928-29 there were 358 degrees granted. In 1929-30 there were 381. This indicates that while the total number of students enrolled in the College is declining, the number of students graduating has definitely increased during the last four years.

HONORS

The College publishes each year in October an honor roll of students who have maintained during the three preceding quarters a point ratio of 3.5. This roll included the names of 128 persons for the year 1930-31, of whom 74 were men and 54 were women. During the year 1931-32 there were 134 students on the honor roll, 98 men and 36 women. The number of honor students for 1928-29 was 68; that for 1929-30 was 91. This shows a rapid increase in honors students during the last four years, which is most gratifying.

During the year 1930-31, 34 students graduated with honors, based upon a cumulative point ratio of 3.5 for the entire four years' work. During the year 1931-32, 24 students graduated on the same basis. By action of the faculty, the designation "with honors" has now been changed to *cum laude* and *summa cum laude*, those students who have a cumulative point ratio of 3.8 being given this latter distinction.

Students of marked ability are encouraged to become candidates for distinction either in a single subject or in a group of related subjects. They must announce their intention before the beginning of the senior year. Such students are given special programs of work which differ from the regular classroom instruction in being much more flexible and leaving much more to the student's initiative. The aim is to afford an opportunity for wide reading in a field in which the student is interested, and to develop the student's powers of organizing and presenting in acceptable written form the facts and conclu-

sions in connection with his study. Instead of lectures and quizzes, there are frequent conferences with the instructor. Our experience is that this type of work is greatly appreciated by the better students. Assistant Professor Royall H. Snow, Chairman of the Committee on Honors, under whose general supervision this work for distinction is conducted, reports as follows:

The Committee has made a sustained effort to bring to the attention of properly qualified students the provisions for granting degrees with distinction in special subjects. The result has been a marked increase of candidates for such degrees, the number rising from seven when your Committee was appointed to the twenty-seven who are at present candidates. There is also an encouraging distribution through departments, the records showing that there have been candidates from Botany, Chemistry, Economics, English, Fine Arts, German, Geology, History, Mathematics, Philosophy, Physiology, Political Science, Psychology, Sociology, and Zoology and Entomology.

Your Committee, in carrying out its policy of encouraging superior students, has made it a point to write letters of congratulation at the end of the sophomore year to students who have maintained a high standing. A consequence of this has been that many students who intend to become candidates for distinction make their application earlier than required. Formerly all but a negligible number of applications were made at the end of the ninth quarter. Of the present candidates, approximately one-half submitted their programs at the start of the seventh or eighth quarter. The Committee feels that this tendency toward an earlier planning of an integrated course is a very desirable one.

During the year 1930-31, there were 5 students who graduated with high distinction and 16 students who graduated with distinction. During the year 1931-32, there were 6 students who graduated with high distinction and 5 students who graduated with distinction.

During the last two years special attention has been given to superior freshman students. The Junior Dean has invited those freshmen whose high-school record, intelligence tests, and mid-quarter reports indicate high capacity to special interviews. These take the form of a friendly conversation, in which the opportunity and value of an intellectual life at the University are emphasized. A list of good books is given to each student, and he is encouraged to read as widely as possible in fields outside his courses. During the Spring Quarter those students who have achieved a high scholastic record are invited to a scholarship dinner, at which some member of the faculty speaks on a topic related to liberal education. These events have proved most interesting and valuable. The students enjoy the opportunity of contact with the supervisors, who are also present, and with the members of the administrative staff; and those members of the faculty who are invited have the opportunity of becoming acquainted with a group of outstanding, promising young men and young women. During the Autumn and Winter quarters of the year 1930-31 there were 164 freshmen who maintained for at least one quarter a point ratio of 3.33. During the Autumn and Winter quarters of 1931-32 there were 143 who maintained this point ratio. We do not have data with regard to previous freshman classes, but it is believed that these numbers are considerably higher than in previous years.

DISMISSALS, PROBATION, AND REINSTATEMENT

During the year 1930-31 there were 186 students dismissed as against 238 for the preceding year, and 328 for the year 1928-29. This represents a decrease of 52 over the preceding year and of 142 over the year before that.

The distribution by quarters and by the various faculty rules which apply is shown in the following table:

<i>Rules by Which Students Were Dismissed</i>	Summer	Autumn	Winter	Spring	<i>Total</i>
On probation	8	19	22	22	71
Two-thirds rule	4	35	12	27	78
Nine-quarter rule	2	0	6	4	12
Twelve-quarter rule	0	0	2	0	2
Probation more than twice	4	3	7	4	18
Special action	0	0	5	0	5
Total	18	57	54	57	186

Of these 186 students dismissed, 89 were freshmen, 45 were sophomores, 36 were juniors, 10 were seniors, and 6 were special students.

During the year 1931-32, there were 164 students dismissed, a decrease of 22 from the preceding year. The distribution of these dismissals is shown in the following table:

<i>Rules by Which Students Were Dismissed</i>	Summer	Autumn	Winter	Spring	<i>Total</i>
On probation	6	22	32	21	81
Two-thirds rule	8	31	17	11	67
Nine-quarter rule	0	2	1	2	5
Twelve-quarter rule	0	0	0	0	0
Probation more than twice	2	0	4	5	11
Special action	0	0	0	0	0
Total	16	55	54	39	164

Of these 164 students dismissed, 82 were freshmen, 48 were sophomores, 21 were juniors, 8 were seniors, and 5 were special students.

During the year 1930-31 there was a total of 329 students placed on probation as against 342 of the preceding year, and 491 during the year 1928-29. This represents a decrease of 13 over the preceding year and of 162 over the year before that. Distributed by quarters, the probation cases were as follows:

	Fresh.	Soph.	Jrs.	Srs.	Spls.	<i>Total</i>
Summer	4	5	7	3	8*	27
Autumn	72	36	13	6	2	129
Winter	35	29	15	6	1	86
Spring	48	24	7	6	2	87
Total	159	94	42	21	13	329

* Transient students for the Summer Quarter only.

During the following year, 308 students were placed on probation, a decrease of 21. The following table shows the distribution by quarters:

	Fresh.	Soph.	Jrs.	Srs.	Spls.	<i>Total</i>
Summer	3	4	7	4	7*	25
Autumn	81	34	17	12	1	145
Winter	31	30	9	3	..	73
Spring	38	22	2	3	..	65
Total	153	90	35	22	8	308

* Transient students for the Summer Quarter only.

During the academic year June 13, 1930, to June 15, 1931, 180 petitions for reinstatement were submitted to the Petitions Committee. Of these, 73 were declined, 31 approved unconditionally, and 76 approved conditionally upon the

student's passing an examination on two or three books. Of the students whose petitions were approved conditionally, 61 took the examination, and 24 passed. The total number of reinstatements was, therefore, 55.

In the following year, 1931-32, 143 petitions for reinstatement were submitted. Of these, 63 were declined, 21 were approved unconditionally, and 59 were approved conditionally upon the student's passing an examination on two or three books. Of the last group, 36 students took the examination, and 22 passed. Therefore, the total number of reinstatements was 43.

The result of a review of the dismissals and probations during the past four years is most encouraging. There has been no diminution in the standards for scholastic work, but far fewer students are dismissed and placed on probation than was the case a few years ago. This affords the best possible evidence of the effectiveness of our program in student guidance and in improving the quality of our teaching.

THE NEW CURRICULUM

Beginning with the Summer Quarter of 1932, the new curriculum of the College will go into effect for entering freshmen; it will not be applied to students previously enrolled in the College. This curriculum is the result of several years' study by a strong committee of the faculty under the chairmanship of Professor George H. Sabine. It reflects tendencies noticeable at the present time generally in American universities and is particularly similar to the curriculum recently adopted by the College of Letters and Science of the University of Wisconsin. In our annual report of two years ago, we discussed the defects in the existing curriculum and indicated the lines along which the Curriculum Committee might be expected to recommend changes. The new curriculum, adopted by the Faculty and the Board of Trustees, constitutes a distinct forward step and facilitates the achievement of the aims and purposes of the College as these were stated in our last report.

The curriculum is closely related to a division of the work of the college into a junior and a senior division, the junior division including the freshman and sophomore years, and the senior division the last two years of college work. The work of the junior division is designed not only to prepare students for that of the senior division, but also to provide a broad and satisfactory education for the large number of students who either enter the professional schools or leave the University after the completion of the sophomore year. The student satisfactorily completing the work of the junior division will be granted a certificate entitled "Certificate in Liberal Studies." The requirements for this certificate are (1) the completion of ninety credit hours of academic work and the required work in Military Science, Physical Education and Hygiene; (2) a cumulative point ratio of 1.7 on work undertaken; and (3) completion of the requirements for the junior division. These requirements include a demonstrated ability to write clear and correct expository English; a general five-hour course in English literature; either a reading knowledge of one foreign language or a working knowledge of two foreign languages; a year's connected work of fifteen credit hours in either the physical sciences or the biological sciences; and a year's connected work of fifteen credit hours in social science. These requirements constitute a substantial reduction in amount from those in the old curriculum. In special cases they can be further reduced by exemption from one of the four requirements in English Literature, foreign languages, natural science, or social science. The requirements in English

composition and in foreign language may be met either by satisfactorily passing courses in the subjects or by passing proficiency examinations. It is expected that an increasing number of students will be able to satisfy these requirements by such proficiency examinations on the basis of work done in the high school, and thus have a larger amount of time to devote to electives in the field of their interest. It will be observed that the language requirement has been substantially reduced in quantitative terms, and that the emphasis is placed upon the possession of a certain degree of proficiency. It is hoped that with improvement in the high-school training a considerable number of students may likewise satisfy the science and the social science requirements in part by passing proficiency examinations in these subjects. The College will make provision for a considerable number of fifteen-hour sequences of courses in science and social science through which the requirements in these fields may be met. These sequences, each consisting of three five-hour courses, in some instances will not all fall within a single department. Thus one sequence has been arranged in the physical sciences consisting of five hours of Chemistry, five hours of Physics, and five hours of Geology. An example of such a sequence in the social sciences consists of ten hours of American History and five hours of American Government (Political Science). This all makes for flexibility and affords the student a wide range of choice. Furthermore, by the reduction in the amount of the requirements the student will ordinarily have one-third of his time free for electives. It is believed that a student in the junior division will, under these new arrangements, enjoy a much larger opportunity for pursuing any interest which he may have developed, or for broadening his general education. Particularly for those who can remain in the University for only two years, this curriculum permits a much wider selection of work and ought to afford a much better preparation for life than the old curriculum with its much larger fixed element of requirements. A student who at the end of two years' work in the junior division does not have a cumulative point ratio of 1.7 will not receive the "Certificate in Liberal Studies," but he may remain in the junior division and pursue his education so long as he is not subject to dismissal under the University rules.

Admission to the senior division of the College is conditioned upon completion of all the requirements of the junior division with a cumulative point ratio of 1.8 on all work undertaken. A student who has not achieved this point ratio is permitted to remain in the junior division, subject to the usual rules of dismissal, until he has attained a point ratio of 1.8, but such additional work in the junior division will not be counted toward graduation in the senior division. The requirements for the A.B. degree are (1) ninety hours of credit, of which sixty hours shall be in courses numbered 500 or above; (2) a cumulative point ratio of 1.8 on all work undertaken in the senior division; (3) a major consisting of not less than forty hours of related work, or more than sixty hours in a single department, with a point ratio of not less than 2.25, to be composed entirely of courses taken in the senior division; and (4) the required Senior Survey course. These requirements embody a number of important changes. Two-thirds of the student's work in the senior division must now be taken in courses which are not open to freshmen and are thus of intermediate or advanced character.

The requirement of a 1.8 point ratio for entrance to the senior division and the requirement of a 2.25 point ratio on the work of the major (a minimum of forty hours) constitute substantial advances in the qualitative standard of

work. Some students will undoubtedly not be able to achieve this standard, but our experience in the past indicates that many who at present fall below this level will be spurred on to better performance and will succeed in raising their point ratio to the necessary requirement. Those who are unable to do this can more profitably pursue courses in the junior division and accept the "Certificate in Liberal Studies." There is little profit to be gained from pursuing the higher branches of university work when one does not possess the intellectual equipment necessary to achieve these moderate scholastic standards.

Under the new arrangement the student's major will consist of at least forty hours' work selected with reference to his own interest. It need not all be taken in one department. There is no maximum limit placed on the amount of work in the major field, but not more than sixty hours may be taken in one department. In planning this course of study the student will be assisted by a Major Adviser, appointed by the Dean of the College. This provision withdraws the control of the student's major from the department, where it has hitherto rested, and centralizes it in the Dean's office. The purpose is to make the student's interest and not departmental boundary lines the basis for planning the work in the major. A student's interest may fall in a field which overlaps two or more departments. Department lines are very artificial and arbitrary. They should not constitute barriers to the pursuit of a real intellectual interest on the part of the student.

One of the most significant provisions of the new plan is the opportunity afforded departments occupying allied fields of instruction and research to organize as a group. Approval by the Dean and Executive Committee is required for such organization. For many purposes it is felt that the department is too small, and that the College is too large a unit for effective administration. When such a group has been formed the College will cede to it (1) jurisdiction over all sequences of elementary courses by which the requirements in the junior division may be met; (2) supervision and standardization of proficiency tests; (3) jurisdiction over all 600 courses offered by the departments in the group; and (4) direction of the work of students whose fields of concentration fall within the group. The departments of Classical Languages, English, German, and Romance Languages have already formed such a group and are functioning efficiently under this new organization. It is believed that this arrangement will prove most useful in liberalizing the administration of the requirements of the College, and in securing deliberation and consultation on questions which affect several allied departments but which are not college-wide in their application. Such groups, where organized, are charged with the duty of considering the feasibility and advisability of establishing comprehensive examinations for students majoring in their general field, and may, with the approval of the Dean and Executive Committee, make such examinations a part of the requirements for their major students. Comprehensive examinations have been the subject of much discussion in recent years in American universities, and various experiments in this direction have been inaugurated, particularly at Harvard and the University of Chicago. They promise much in the way of unifying and synthesizing a student's work; in eliminating the fragmentary and scattered character and effect of our present educational process, which emphasizes the single course and the mere accumulation of courses. It is hoped that we shall make progress in the next few years in the institution of comprehensive examinations. We must proceed slowly and experimentally, but the new curriculum offers an opportunity to make a begin-

ning in this direction. It is possible that this device may result in a most significant improvement in the methods and processes of liberal education.

SUPERVISORS

One of the outstanding features in the work of the College in recent years is the development of supervisors of the large elementary courses. There has been no formal action by the Faculty or Board of Trustees; the office and duties of the supervisor is one of the conventions of our university constitution. The supervisorship rests on understanding rather than on formal legislation. Nevertheless, it is a significant and very useful institution. In all of the departments where there are large elementary courses one member of the staff is recognized as responsible for supervising the work of the corps of teachers and for developing a reasonably uniform method of instruction. There is no disposition to reduce the instructional work to a dead level of prescription; the initiative of the individual teacher must be carefully safeguarded. But there is much that can be done, and is being done, by the supervisor in the way of advice and suggestion that is helpful. The supervisors in this college have occasional meetings under the chairmanship of the Junior Dean, where problems are discussed, and experiences exchanged. There is no doubt as to the stimulating effect that this organization is having on the work in this area.

ARTS SURVEY COURSES

For a number of years the College has offered two five-hour courses, one on the "Foundations of Contemporary Civilization," given by Professor J. A. Leighton, of the Department of Philosophy, the other on "Development of Modern Science," given by Professor W. E. Henderson, of the Department of Chemistry. These courses are not under any department but are sponsored directly by the College. All students who are candidates for the A.B. degree are required in their senior year to take the course on Contemporary Civilization if their field of concentration falls within the general area of the natural sciences. Similarly, all seniors whose fields of concentration are in the social sciences or humanities are required to take the course in Modern Science. The purpose of this requirement is to insure that every student before graduation secures a broad orientation to that field of knowledge in which he has not specialized. The introduction of these courses was an experiment. In the spring of 1931 it was thought desirable to appraise the success of this experiment. A committee, through the use of an unsigned questionnaire, secured the judgment of a large group of students who had taken the course. They reported in favor of continuing the courses as a requirement. There was a surprisingly large majority of the students in these classes who expressed themselves as considering the courses valuable. Certain suggestions were made by the committee for improvements which will be effected as soon as possible. Professor Leighton will in the future divide with Professor Peter H. Odegard the responsibility for the course in Modern Civilization.

COURSE IN GREEK CIVILIZATION

The Committee on Honors has sponsored an experimental course in Greek Civilization (Survey 603) not given under any department but offered by the College. This course was offered during the Winter Quarter of 1932. The course carries fifteen hours credit and those enrolling in it give their entire time for the quarter to this one enterprise. A series of forty-eight lectures on various

aspects of Greek Civilization was arranged, members of the instructional staff from nine departments of the University cooperating, and to supplement these small discussion groups were organized. Bibliographies and outlines were supplied to the students for their guidance, but precise assignments were avoided and the students were free to read on their own initiative. The term reports and examinations indicated such satisfactory results that the course will be repeated during the year 1932-33, and the possibility of organizing other courses along similar lines is being considered.

The special features of this course are (1) that it is not confined within the limits of one department but utilizes the instructional resources of nine departments; (2) the student for the period of a quarter concentrates on this one subject, but approaches it from many angles—historical, political, economic, philosophical, literary, artistic, and scientific; (3) large freedom is left to each member of the class to pursue his own interest with a minimum of requirements. It has been a fine adventure in learning in which students and instructors have shared the zest of exploration and discovery. The generous willingness of the thirteen members of the instructional staff to add to their already substantial teaching loads the additional labor of lecturing or conducting discussion conferences in this course is evidence of their keen interest in the experiment.

THE ARTS COLLEGE STUDENT COUNCIL

One of the interesting developments during the past two years has been the formation of a student council in the College. This organization is composed of students representing the various classes, the major interests and preprofessional groups.

The students organized it for the following purposes:

1. To create among the students of the College of Arts and Sciences a better loyalty to the College, an *esprit de corps* among themselves.
2. To foster among the students a better understanding of the aims and purposes of a Liberal Arts education.
3. To serve as a connecting link between the students of the College and the Student Senate.
4. To serve as a connecting link between the students of the College and the faculty and administration of the College.
5. To serve in such other capacities as seem necessary and wise.

CONTINUED EDUCATION FOR THE ALUMNI

The College of Arts and Sciences, in close cooperation with the Ohio State University Association, is preparing a program of lectures and discussions for the three days following Commencement in June, 1933. A committee of the faculty has been working on the project and has prepared a tentative program. The keynote of the series is to be "Contemporary Thought." Lectures in the fields of social science, natural science, art, literature, and music are planned with the hope that a ready response will be obtained from the alumni of this College and other Colleges of the University. The idea behind this plan is that of offering an opportunity to the college graduate to bring himself up to date in fields of knowledge, the development of which he has been unable to follow. The need for some effort on the part of the University to keep its graduates and other friends informed has been recognized by many other institutions. The College hopes that it will be able by this project to render a real service to the alumni and friends of Ohio State University.

THE COLLEGE ADMINISTRATION

In the autumn of 1930 Mr. J. Huntley Dupre joined the staff of the College as Junior Dean, succeeding Mr. J. C. Troutman, who, at his own request, gave up the Junior Deanship to accept a position as Student Counselor and to devote himself especially to the work of guiding sophomores. Dean Dupre has demonstrated his high capacity for this work. He brings a rich experience in Y.M.C.A. work and in teaching, and his fertility of ideas and inventiveness in developing devices for improving the educational process in the junior area have been of the highest value to the College. In 1931 Mrs. Eva Demos resigned as Assistant to the Junior Dean and was succeeded by Mrs. Naomi Baker Fernelius, whose work on the campus as secretary of the Y.W.C.A. and experience in other relations makes her a very valuable member of our staff.

Five members of the staff of the College administration devote themselves largely to interviewing students on a wide range of problems. The number of these interviews during the past two years indicates the extensiveness of our student contact. In 1930-31, approximately 9,000 interviews, and in 1931-32, approximately 10,000 interviews were held. These relate to a wide variety of subjects, including the making of schedules, withdrawals, and dropping of courses, petitions for reinstatement, personal problems, scholastic difficulties, discussions concerning intellectual and cultural development, physical and emotional problems, vocational guidance, and absence from classes. A large number of interviews are also held with parents, and voluminous correspondence is carried on with parents concerning the progress and problems of their children. The College also carries on a considerable correspondence with officials of high schools, by which is reported information concerning the progress of students and problems upon which the experience of principals and superintendents may be of value. The College is in constant contact with other personnel agencies on the campus, including the Student Health Service, the Psychological Clinic, the Speech Clinic, the Y.M.C.A., the Y.W.C.A., and the various departments of instruction. A special emphasis has been given to the encouragement of gifted students, and letters are sent to parents and high-school principals in connection with all students who have attained the honor roll. For those students who are not doing well in their work various aids are provided. The College office is in close touch with those departments which undertake remedial work and with other general agencies of the University which can be of assistance. Several statistical studies have been made, including the following:

1. A study of students in special speed sections in German and Chemistry.
2. A study of the academic history of students who entered with conditions.
3. The beginning of a four-year study of those students entering in the autumn of 1930 and the autumn of 1931 who were on the honor roll at the end of their first quarter and those who were on probation or were dismissed at the end of their first quarter.
4. A comparative study of the number of students by classes who have been dismissed and who have been placed on probation from June, 1928.

It has been impossible to develop the placement service for students graduating from the College. This is a very imperative need, but progress has been prevented as a result of the general economic depression and the lack of financial support.

It is the opinion of the members of the staff of the College administration that their work, to be most effective, should be intimately connected with class-

room teaching. Three members have conducted courses in addition to their administrative work. Dean Shepard has carried a three-hour course through the year, a seminar for two quarters, and has guided the work of one doctoral dissertation in the Department of Political Science. Dean Dupre has conducted courses in History and assisted generously in the work of the course in Greek Civilization. Mr. Hamilton has conducted courses in Political Science. An interest in scholarly research is also maintained by members of the administrative staff. During the biennium a number of studies have been published in the field of Political Science, and Dean Dupre has completed a significant monograph on "Lazare Carnot: A Study of His Political Career and Ideas."

Department of Astronomy

The continued light enrollment in this department made it necessary at the beginning of the academic year 1931-32 to reduce the teaching staff. Mr. Earl L. Williams, who had for several years served as instructor in the Department, left the University, and Professor E. S. Manson is now carrying on the teaching work of the Department. He is aided by one Observatory Assistant, whose work, however, largely consists in making systematic meteorological observations. Professor Manson has been carrying on consistently his observation of occultations. The Observatory is open to visitors regularly on certain evenings, and a considerable number of visitors take advantage of the opportunity. Occasionally special nights are arranged for schools and other organizations. Under the new curriculum it is expected that the number of students electing Astronomy will considerably increase, as a science requirement can be completed in this subject or by taking a sequence consisting of Mathematics, Physics, and Astronomy. If our expectations in this respect are fulfilled, it will be necessary to provide additional instructional staff. A very satisfactory arrangement has been entered into with the Perkins Observatory, by which advanced students may pursue their research work with the unusual facilities offered by that institution. It is hoped that a number of such students will take advantage of this arrangement. The relationship between the Department of Astronomy and the Perkins Observatory is most friendly and the department is profiting from this contact.

Department of Bacteriology

The enrollment in Bacteriology during the last three years has advanced very considerably. The total number of students enrolled in all courses in 1929-30 was 835; in 1930-31, 1,083; and in 1931-32, 1,305. It is expected that this increase will continue. The number of students majoring in Bacteriology and Graduate students in this department has also materially increased. This increase has been made possible by the new building which was opened for occupancy in October, 1930, and which this department shares with the College of Pharmacy. This building is sixty by two hundred feet, with four stories and a basement. The College of Pharmacy occupies the entire first floor except for the Library, which is used in common, and two rooms on the second floor. The Department of Bacteriology has the remainder of the three upper floors and the use of the basement. This has given the Department of Bacteriology more than double the laboratory space that it had previously. The growth in the Department, however, has presented a serious problem both with respect to sufficient instructional staff and adequate laboratory facilities. Al-

ready the laboratories are practically filled to capacity and the instructors are overworked. Bacteriology is distinctly a service department, drawing its students from the Medical, the Dental, the Agricultural, and the Veterinary Colleges, as well as from the College of Arts and the Graduate School. If the growth in numbers continues, a substantial increase in the teaching staff will be necessary.

Department of Chemistry

During the past two years the senior staff of the Department has remained intact. The growth in the student enrollment in advanced undergraduate and graduate courses is an outstanding feature of the period. The number of Ph.D. degrees granted in Chemistry is something of an index of the graduate work in this field. During the nine-year period from 1922 to 1931 there were 167 doctoral degrees granted in Chemistry at Ohio State University, which was exceeded by only three other universities. In 1930-31 there were 39 degrees granted at Ohio State, the largest number ever granted in Chemistry in any American university. Two very interesting experiments in teaching have been conducted during the past two years. On the basis of placement tests a selected group of students were enrolled in a special section of the elementary course. In spite of certain difficulties largely connected with laboratory space, this group covered the work of three quarters in two. There is no doubt of the success of this plan of segregating gifted students, giving them special opportunities and exacting much heavier requirements. The other experiment is a symposium on "The Nature of Matter," consisting of ten lectures by outstanding scholars in various fields. Not only several of the staff of the Department, but professors from other departments participated. The lectures were primarily for students in the second quarter of the elementary course, but were largely attended by others. They served as a splendid orientation to the more recent developments in the theory of matter, and their deeper philosophical implications.

In addition to the instructional work, a constant program of research is going forward, in which all members of the Department are active. Several members of the Department have received substantial grants in aid from the National Research Council, from the Engineering Foundation, from the E. I. du Pont de Nemours Company, from the Timken Steel and Tube Company, and from the Lang Dry Cleaning Company, in carrying on their research. A formidable list of recent publications by members of the staff attest their productive scholarship. During the past two summers the Department has enjoyed the opportunity of having a number of distinguished visiting professors on its staff. In 1930 Professor Thomas M. Lowry, of Cambridge, England, and Professor Richard A. Morton, of the University of Liverpool, were guest lecturers. In 1931 Professor Harry B. Weiser, of Rice Institute, Professor Reynold C. Fuson, of the University of Illinois, and Professor G. M. Mellon, of Purdue University, conducted courses. The Department has received from the United States Navy, through the provisions of an Act of Congress, valuable equipment to the amount of several thousands of dollars. For the year 1932-33 provision has been made for the appointment of an Assistant Director of Laboratories, who will relieve the Chairman of a large share of his administrative work. He has been overburdened with the general administration of a large and growing department, and this assistance will permit him to some extent to resume his program of research.

Department of Classical Languages

At the beginning of the year 1930-31, Dr. J. B. Titchener was called to the University as an Assistant Professor to succeed Dr. Lester K. Born, who resigned to accept a position at Western Reserve University. Dr. Titchener is a thorough scholar and an inspiring teacher. The increasing enrollment in the graduate area in this department required an additional member of the staff who could take charge of graduate work. During the course of the year 1930-31, Professor Ogle was asked to assume the Directorship of the American School of Classical Studies at Rome. He was given a two-years leave of absence. This made necessary the appointment of an additional instructor for the period of Professor Ogle's leave, and Dr. John W. Hough, who had recently taken his Ph.D. degree at Princeton, was secured. Dr. Hough has won a very enviable position in the University, both as a teacher and a scholar. The growth in the Department, particularly in graduate work and in the Summer Session, certainly justifies making this position permanent, and it is hoped that on Professor Ogle's return Dr. Hough can be retained. The heavy burden during the Summer Session has been partially met by the employment of teachers from outside the University through the assistance of the Summer Session Council. Professor George W. Bolling continues his very active interest in research in the field of Linguistics. He represented the University, the Linguistic Society of America, and the American Philological Association at the Second International Congress of Linguistics at Geneva. He is this year president of the Linguistic Society of America and editor of its publications. He is also editor of *Language*. Professor Titchener has been assisted by a grant of \$600 from the American Council of Learned Societies for the purchase of manuscript photostats in connection with his work of editing the anonymous *Liber de Viris Illustribus*. Professor Hodgman's course in Medical Latin continues to attract students in the College of Medicine to such an extent that it has been found necessary to offer it two quarters instead of one. Professor W. S. Elden is in charge of the Latin Service Bureau and the editor of *Latin News and Notes*, a very useful publication for teachers of Latin in this state.

Department of English

At the close of the year 1930-31, Professor J. V. Denney retired from the chairmanship of this Department, and Professor E. L. Beck was appointed acting chairman for the year 1931-32. He was re-appointed for the year 1932-33. Professor Denney's long years of service to the University, the College, and the Department, are well-known on this campus. He was the first chairman of the united departments of English Literature and Rhetoric. For many years he was Dean of the College. He has occupied many posts of distinction in the academic world, among them the national presidency of the American Association of University Professors. His retirement from the administrative direction of the Department leaves him free to carry on his teaching work in the Department. At the beginning of the year 1931-32, Assistant Professor James F. Fullington came to the Department from the College of Education as supervisor of course 401, generally known as "Freshman Composition." He has vigorously attacked the problem of improving the work in this basic field, and has made a good start. The ability to write lucid and correct expository English should characterize every student on entering the University. Unfortunately this is not the case, and a majority require

at least a term's work in this subject. Hitherto all students have been required to take the course in freshman composition. In the future those students who are able to demonstrate a satisfactory skill in written English by a proficiency test will be excused from this requirement. Provision is also being made for those students who are unable to carry the course in freshman English; they will be given special work without credit until they can qualify for the regular freshman course. The Department is preparing to conduct proficiency and placement tests on a rather extensive scale for the purpose of certifying students for advancement to the senior division as well as for assignment to the courses in which they will derive the most profit. A committee of the Department has been working on a statement of specific requirements for the A. M. degree. This has been completed. They are now engaged in formulating a similar statement for the Ph.D. degree. It is expected that these outlined programs will place the graduate work in English on a much stronger basis.

Department of Geology

Changes in personnel in this department during the biennium include the resignations of Dr. H. D. Squires and Dr. Waldo S. Glock and the appointment in their places of Mr. Alfred J. Holmberg and Dr. W. Storrs Cole. An important modification in the method employed in the elementary courses has been instituted, by which the laboratory work is more closely integrated with the classroom discussions. This is in line with the changes made in the elementary courses in Botany and Zoology, and apparently constitutes a distinct improvement. Professor Paris B. Stockdale is the effective and inspiring supervisor of elementary courses. In the summer of 1931 the Department conducted for the first time a Summer Field Course, working from a station near Dayton, Tennessee. It was under the direction of Professor Stockdale. Ten students were enrolled in the course, which is about the limit of size for a field course conducted by one man. The venture was a distinct success, and it is planned to repeat it every summer. The Department, during the past year, has lost a benefactor in the death of General Edward B. Orton, Jr., who some years ago founded the Edward Orton Memorial Library of Geology. General Orton's gifts to the Library, including the cost of remodeling and furnishing the quarters which it occupies in Orton Hall, the paintings which adorn the walls, and the books, have amounted during the past fifteen years to about \$50,000. By his will he made provision for the future of the Library. A bequest of \$10,000, which has been deposited with the State Treasurer as part of the irreducible debt of the State, will yield 6 per cent interest and thus provide an annual sum of \$600 for the purchase of books. The members of the Department of Geology, in addition to carrying a very effective program of teaching, are all continuously engaged in research. The evidence of this activity is found in the publication during the years 1930 and 1931 of thirty-one studies, several of which are of very significant volume and importance. The work of the Ohio Geological Survey is housed in Orton Hall, and its director, Dr. Wilbur Stout, gives one course in the Department. The close association of the Department of Geology and the Geological Survey is a source of mutual helpfulness.

Department of German

The Department of German has experienced a number of changes in personnel during the biennial period. Dr. A. C. Mahr, Associate Professor of

German at Stanford University, was appointed a visiting professor during the Spring Quarter of 1930, and accepted a permanent professorship at the beginning of the Autumn Quarter of 1930. This appointment filled most acceptably the vacancy left by the resignation of Professor Traugott Böhme. In 1931 Professor Hans Kurath was granted a year's leave of absence to act as chairman of a committee of scholars who are collecting data for a Linguistic Atlas of the United States and Canada. His position was temporarily filled by the appointment of Dr. E. A. Philippson, of the University of Cologne, as Lecturer. Unfortunately Professor Kurath is not to return to Ohio State; he has accepted a call to the chairmanship of the Department of German at Brown University. Dr. Philippson will continue during 1932-33 to conduct the courses assigned to Professor Kurath. In June, 1930, Dr. May Thomas, who had served the Department faithfully for more than a quarter of a century, was made emeritus assistant professor. A very interesting and successful experiment has been undertaken during the past year. A section of selected beginning students was formed at the beginning of the year on the basis of placement tests. By keeping this group together throughout the year, highly satisfactory results have been achieved and almost twice the usual amount of work accomplished. During the two-year period members of the staff have produced two successful college texts and a number of articles have been published in scientific and pedagogical journals. A monograph of real significance is "The Visit of the Rurik to San Francisco in 1816," by Professor Mahr, published by the Stanford University Press, 1932. The growth in student enrollment in the German Department, and especially in the advanced undergraduate and graduate courses, is gratifying and an evidence that the effect of the Great War on work in this field is in the way of being overcome.

Department of History

Professor George Wells Knight, Emeritus Professor of History, died on February 10, 1932. For many years he was chairman of the Department of American History. His services to the College and to the University were indeed notable. In point of service he was one of the oldest members of the University faculty, and had had an important part in the development of the University in a number of its Colleges and divisions. A large number of alumni cherish his memory as an inspiring and effective teacher of History. In 1930 Professor Arthur C. Cole resigned to accept a professorship at Western Reserve University. His position has not been filled, but Dr. Henry H. Simms has been carrying his courses in American History successfully. At this time Professor Walter Dorn, of the University of Wisconsin, accepted a professorship in the Department and has proved an especially able teacher as well as a very productive scholar. His special field is the Reformation and the Renaissance. In 1931 the Department lost Professor J. A. O. Larson, whose field was Ancient History, and Assistant Professor Paul H. Clyde, who gave courses in the History of the Far East. The vacancy occasioned by Professor Larsen's resignation was filled by the appointment of Professor William F. McDonald, who came to us from Cornell University. Professor McDonald is a brilliant teacher and has already won a strong place for himself in the University. It is a source of gratification that through him a *liaison* has been effected with the Department of Classical Languages by which Professor McDonald will give a course in that Department at regular intervals. Professor Clyde's position has not as yet been filled. During the

Spring Quarter of 1932 Professor Ferdinand Schevill, of the University of Chicago, was visiting professor. His presence on the campus was a great stimulation not only to students and faculty of the Department of History but to other groups before whom he spoke on a number of occasions. It is interesting to note that Professor Schevill's judgment is that our graduate students are generally of a very high quality. During the past year the Department has been conducting an experiment in a course for freshmen entitled "The History of Western Civilization." This is a continuous course of five hours for three quarters, in which practically every member of the Department has participated by giving lectures or by conducting discussion groups. The students in this course have been selected as especially gifted. The experiment will be continued next year in a somewhat modified form. There is little doubt of its success and there is some discussion as to whether it should be made "the gateway course" for all the work in the Department or whether it should be merely retained as a special arrangement for selected freshmen. Probably the Department will decide upon the latter course. It is another example of the effort that is being made in the College of Arts and Sciences to offer special opportunities for superior students. The student enrollment in History has increased markedly in the advanced undergraduate and graduate areas, and the burden of directing graduate work has become very heavy indeed. This is especially true during the summer sessions. During the summer of 1931, 165 students were enrolled in the Department and working either for the doctor's or master's degree. The opening of the elementary courses in American History to freshmen has resulted in a shift in enrollment. There has been a falling off of about five hundred students in the first course in European History and an increase of about three hundred students in the first course in American History. During the Summer Quarter of 1931 and again in the Winter Quarter of 1932, Professor Carl Wittke delivered a series of lectures before various German universities. On the latter occasion his lectures were given in connection with the bicentennial celebration of the birth of George Washington, which has aroused a great deal of interest in Germany. Members of the Department are carrying on a continuous program of scholarly research, and some of the studies which they have made have attracted wide attention.

Department of Mathematics

With the beginning of the year 1931-32, the permanent staff of the Department was greatly strengthened by the appointment of Dr. Tibor Rado as professor, and of Dr. F. R. Bamforth and Dr. Lincoln LaPaz as assistant professors. The appointment of Dr. Bamforth was to fill the vacancy occasioned by the resignation of Professor A. D. Michal, who had accepted a call to the California Institute of Technology. The other two appointments are additions to the staff of the Department. Professor Rado came to use from the University of Szeged, in Hungary. He is a scholar of international reputation, and has quickly made a very strong place for himself on our faculty. Professor Bamforth had previously taught at Cornell University, and Professor LaPaz at the University of Chicago. Both are highly trained mathematicians and very successful teachers. During the Summer Quarter of 1930, Professor Rudolf Langer of the University of Wisconsin, was a visiting professor, conducting graduate courses. The Ohio State University now has one of the strong Departments of Mathematics in the United States. Graduate

work is developing rapidly, and published studies of members of the staff constitute an imposing list. The Department is attracting visiting national and international research fellows, who come to study with members of the staff. In 1931 the Mathematics Department Library was established in Mendenhall Laboratory in close proximity to the Physics Department Library. This offers new and marked facilities for scholarly work, particularly by advanced students.

Department of Philosophy

In 1930 the Department lost Assistant Professor W. A. Shimer, who accepted a position as Secretary of the United Chapters of Phi Beta Kappa, and in 1931 a still more serious loss was occasioned by the resignation of Professor George H. Sabine, who accepted a call to the Department of Philosophy at Cornell University. The vacancy left by Professor Shimer has been filled by the appointment of Dr. Everett W. Hall, of the University of Chicago. The position occupied by Professor Sabine has not yet been filled. During the summer of 1931 Dr. Paul H. Shilpp served as visiting assistant professor.

Division of Phonetics

The Division of Phonetics is a relatively new organization at Ohio State University. The work which it conducts is of several kinds. It offers a number of courses in the scientific aspects of Phonetics, with an increasing enrollment of students, a considerable number of whom are doing graduate work. It conducts a speech clinic for students who suffer from speech defects. During Freshman Week tests are given to all entering students. It is discovered that a large number suffer from some defect of speech or hearing. Those who are most seriously handicapped are advised to use the facilities offered by the speech clinic and are often greatly aided in their university work as a result of this assistance. Many students who have been failing in their courses have been able to reestablish themselves and do profitable work through the aid of the speech clinic and of courses which they take in the Department. A third line of activity has been the direction of a practical laboratory for students in foreign-language courses. On account of the financial stringency this work has been discontinued for the year 1931-32 and will not be undertaken next year. The fourth line of work carried on by the Department is research, and a number of valuable studies are being made in this field. Professor G. Oscar Russell has been assisted by the Carnegie Foundation in conducting experiments of unusual interest and importance. The question must soon be answered as to whether the various lines of work in speech conducted by the Division of Public Speaking in the English Department, the work of linguistics in the various foreign-language departments, the work in Dramatics, and the work of the Division of Phonetics should not all be organized into a Department of Speech. This development is taking place in other universities and would seem to be desirable at Ohio State. Not only the relief of those individuals in our community who suffer from the handicap of defective hearing and speech requires more attention than has hitherto been given, but the scientific investigation and development of the oral medium of communication constitutes a definite responsibility of our modern university. It is to be hoped that the financial situation will in the near future permit a serious examination of this problem.

Department of Physics

In the autumn of 1930 Professor Alfred Landé, of the University of Tübingen, accepted a permanent appointment as professor of Theoretical Physics at Ohio State University, and Dr. L. H. Thomas, of Cambridge University, England, accepted an appointment as Assistant Professor. He was promoted to an associate professorship in 1931. These two distinguished scholars have greatly strengthened the Department. During the past few years a group of able instructors have been added to the staff of the Department, whose research work has been outstanding. During the Summer Quarter of 1930 the Department greatly profited by having Professor H. A. Wilson, of Rice Institute, and Professor W. W. Watson, of Yale University, as visiting professors. During the summer of 1931 Professor J. S. Foster, of McGill University, and Professor R. T. Birge, of the University of California, were on the staff. These distinguished visiting professors have added greatly to the attractiveness of the Summer Quarter offering, with a consequence of a rapid increase in enrollment in the graduate work. The following figures indicate the progress which has been made in this respect:

Year	Number Enrolled
1928.....	115
1929.....	127
1930.....	181
1931.....	277

The Department is seriously embarrassed for lack of adequate space but is nevertheless carrying out an extensive program of research. The number of registrations in research courses has almost doubled since 1929. Between July 1, 1930, and July 1, 1932, various members of the Department have published thirty-two significant articles in learned and technical reviews, which is ample evidence of the productivity of the Department. Attention has been given to the reorganization of the elementary work in order to meet the needs of the various groups of students in this subject. In these courses students are enrolled who are preparing for Medicine and Dentistry, who are registered in the College of Engineering, who are majoring in allied fields such as Chemistry and Mathematics, as well as those who are contemplating graduate work in Physics. To meet the needs of these several groups a readjustment of courses has been effected, which, it is believed, will accomplish the ends desired in the best possible way. A suggested curriculum has been outlined for students majoring in Physics, which, if followed, will afford a thorough grounding in essential auxiliary subjects such as Mathematics and Chemistry, as well as a substantial body of work in the field of Physics. The requirements for advanced degrees have also been specifically formulated in such a way that students can anticipate in advance the work necessary to be covered. The development of the Alfred Dodge Cole Library has been a source of great satisfaction and greatly facilitates the scholarly work, particularly of advanced students. Beginning with the year 1932-33 the chairman of the Department will secure substantial relief from his excessive load of administrative work by the appointment of an assistant director of laboratories. This will enable him to resume to some extent his own program of research.

Department of Political Science

In the autumn of 1930, Professor Peter H. Odegard, of Williams College, was appointed to a professorship to fill the vacancy caused by the resignation

of Professor Francis W. Coker. Professor Odegard is a most successful and stimulating teacher as well as a productive scholar. He is one of the outstanding authorities in the country in the field of public opinion and propaganda. His recent book on "The American Public Mind" has attracted wide attention. Professor Harvey W. Walker, after assisting the State Department of Finance for some time as Assistant Director of Finance, has, during the past year, given his entire time to the work of the Department. He is Executive Secretary of the Ohio Municipal League, and under his leadership this organization has become once more quite active. He has published under the auspices of the League a number of studies which are useful to city officials. In the summers of 1930 and 1931 he arranged for a "Fire School" for several days at the University, which was largely attended by members of fire departments of Ohio cities. A series of lectures and demonstrations was given of great value to the members of the school. This has now apparently become an annual event. In the spring of 1932 Professor Walker was awarded a Social Science Research fellowship, and will spend the year 1932-33 in Great Britain studying the English system of recruiting members of the permanent civil service. During the Summer Session of 1930, Professor F. W. Coker, of Yale University, taught as a visiting professor; in the Summer Session of 1931, Professor Harold Quigley came to us from the University of Minnesota. Professor Ben Arneson of Ohio Wesleyan will be visiting professor of Political Science during the Summer Session of 1932. The student enrollment in the Department shows a steady and healthy increase, particularly in the advanced undergraduate and graduate areas.

Department of Romance Languages

In 1930 Associate Professor Don L. Demorest joined the staff of the Department and established himself immediately as an able teacher and a scholar of distinction. For the last two years the elementary courses have been conducted in both French and Spanish over the radio. These courses are given both in the daytime for high-school classes and in the evening. The results have been most gratifying, and it is certain that this service is deeply appreciated. Compositions in the languages from people who have had no other instruction but that which they received over the radio proves conclusively that it is possible to teach French and Spanish by this medium. Experiments are being conducted in the best techniques for broadcasting. The work done in educational broadcasting by the Department has attracted widespread attention and has marked the Ohio State University as a leader in this field. Marked progress has been made in the junior division through the methods of instruction introduced by the supervisor, Professor R. E. Monroe. Particularly as a result of placement tests students are more accurately located in their proper language level. It is discovered that there is wide diversity in knowledge of a language among students coming from different high schools with the same credit. The Department is now placing all students with reference to their actual ability and competence regardless of the number of credits which they bring to the University. The method employed in elementary work involves a large use of the spoken word, and the rapidity with which students gain a speaking knowledge of the language is most gratifying. The methods employed in this elementary work have attracted widespread attention throughout the United States. For a good many years plays have been presented in both Spanish and French. These give the students an oppor-

tunity to hear performances in a foreign language, and the proceeds have been very useful in purchasing books in these fields for the University Library. A considerable number of members of the staff during the past two years have spent varying periods abroad, during which they have perfected their knowledge of the language, literature, and life of the peoples which constitute the substance of the courses of instruction in the Department. A declining enrollment in the elementary work in Romance Languages is a characteristic in other universities as well as in Ohio State; but the interest in graduate work and the number of students in advanced and graduate courses have been increasing. The senior staff are carrying on a continuous program of scholarship and research, and a number of important articles and books have appeared during the biennium.

W. J. SHEPARD, *Dean.*

COLLEGE OF COMMERCE AND ADMINISTRATION

EDUCATIONAL INVENTORY

Throughout the past two years, our courses and curricula have been subjected to close scrutiny and careful study. A number of our departments now have educational committees at work attempting to eliminate needless duplication in courses, to effect consolidations of present courses, and to promote the general efficiency of department programs.

In order to coordinate the work of the various departments, to reduce the possibilities of duplication in course contents, and to apply a common educational philosophy to the programs of the several departments, we have established a College Committee on Instruction which passes on all proposals coming from our departments relating to new courses, changes in courses, new curricula and changes in curricula. It is our judgment that this committee has made an invaluable contribution to the work of the college.

THE MOTIVATION OF SUPERIOR STUDENTS

Throughout the two-year period, we have continued our efforts to stimulate students of unusual promise. Interview projects with individual student conferences have been promoted under the general direction of the Junior Dean. The results while tentative and experimental promise much in the way of future accomplishment. We recognize the fact that one of the outstanding problems of modern education is to reach superior students and to bring to them some realization of their scholastic opportunities.

We have continued the publication of an annual honors list, and this device together with the granting of degrees with honors and with distinction have stimulated superior students and created a desire for scholastic honors.

COLLEGE ORGANIZATION

The Board of Trustees, by recent action, authorized a division of the Department of Sociology and the School of Social Administration. Under this action, two separate and distinct divisions are recognized, i.e., a Department of Sociology and a School of Social Administration. Dr. J. E. Hagerty resigned as chairman of the Department of Sociology and Director of the School of Social Administration, his resignation to take effect July 1, 1932. Professor Charles Stillman assumed the directorship of the School on July 1, 1932, and Professor Frederick Lumley became Chairman of the Department of Sociology on the same date. It is expected that this division will lead to a clearer formulation of objectives and promote the general interests of the departments concerned.

In passing we cannot fail to express our regret at Dr. Hagerty's withdrawal from administrative work. His contributions to the development of the college program and his inspiration to the staff are too well known to need any comment. He remains as Professor of Sociology and will continue in the future as in the past to make rich contributions to the life of the College.

RETIREMENT OF PROFESSOR OSMAN C. HOOPER

fourteen Professor Osman C. Hooper, for eighteen years a valued member of the staff of the School of Journalism, was appointed to an Emeritus Professorship, effective July 1, 1932. Professor Hooper has given invaluable services to the School of Journalism. In addition to teaching services of a high order, he has done much to articulate the School with the newspaper interests of Ohio. His contributions in creating the *Ohio Newspaper* and in promoting the Journalism Hall of Fame are typical of the kind of service which he has rendered. Professor Hooper will retain his campus office and continue to edit the *Ohio Newspaper*.

THE MASTER OF BUSINESS ADMINISTRATION DEGREE PROGRAM

One of the most significant educational developments of the biennium is that of a program leading to the degree of Master of Business Administration. This program has been approved by the College Faculty, by the University Council on Instruction, and by the Graduate Council. It is expected that it will be submitted to the University Faculty in the autumn of 1932.

The program as outlined should appeal strongly to graduates of other Ohio colleges and universities and should do much to stimulate our already rapidly growing graduate enrollment.

* * *

PUBLICATIONS OF THE TEACHING STAFF

The members of the teaching staff have continued to make significant contributions to the literature of their fields.

Accounting Department.—Mr. D. S. Bolon, Lecturer in Accounting, collaborated with Mr. G. W. Eckelberry in writing an "Introduction to Accounting." "Problems in Cost Accounting" was the result of the joint authorship of Mr. H. C. Greer, formerly Chairman of the Department, and Assistant Professor Russell S. Willcox. "Solutions to C. P. A. Problems," a companion volume to "C. P. A. Problems" (published in 1930), was prepared by Associate Professors J. B. Taylor and H. C. Miller. Mr. D. M. Shonting is the author of a section on "Budgeting" in the revised "Accountants' Handbook." In addition, members of the staff have contributed numerous book reviews and articles on technical accounting subjects.

Business Organization Department.—Many members of this Department have undertaken research and writing projects in the period covered by this report. Professor Willis Wissler published an excellent text entitled "Business Administration." Associate Professor Ralph C. Davis has written a book, "Purchasing and Storing," for the Alexander Hamilton Institute Series. Professor T. N. Beckman published a revision of his "Credits and Collections in Theory and Practice." Professors Maynard, Weidler, and Beckman have just published a revised edition of their "Principles of Marketing." Professors Maynard and Weidler have completed a revision of their book, "An Introduction to Business." Professor C. A. Dice has published a number of articles and has continued his work of revision of his text "The Stock Market." Dr. Dice, in collaboration with certain other staff members, is preparing a book manuscript in the field of Money and Banking. Dr. Kenneth Dameron has a fundamental text in advertising well under way.

In addition to these larger projects, staff members have written a considerable number of articles for trade and scientific publications.

Geography Department.—Professor Roderick Peattie has published a revision of his elementary textbook, "College Geography." Professor F. A. Carlson has in preparation a book manuscript on Latin America which will be published in the near future. Professor C. C. Huntington has completed a supplementary Geography of Ohio to accompany the school geographies published by the Rand McNally Company. Many staff members have written papers for presentation before various scientific organizations.

Other Departments.—Various members of other departments have carried on substantial research and have made important contributions to the literature of their fields in the form of books, scientific articles and addresses before learned societies.

SERVICES OF THE COLLEGE TO THE STATE

In addition to its services on the campus, the College has rendered certain services to the State at large. The Department of Commerce Extension has offered regular university courses to mature students in many cities of the State. In this connection, it is our thought that this Department has taken a position of leadership in the rapidly growing field of adult education.

The Bureau of Business Research has rendered valuable services through its research and publication of monographs on a variety of statistical, merchandising, accounting, and manufacturing subjects. Its activities have been loyally supported by its business constituency, which has been most cordial in its cooperation with the research program.

The members of the teaching staff have also been liberal of their time and energy in responding to numerous requests to address business, educational, and other groups.

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Department of Accounting

PUBLICATIONS

During the two-year period (1930-31 and 1931-32), publications of members of the staff included the following:

Mr. D. S. Bolon, Lecturer in Accounting, collaborated with Mr. G. W. Eckelberry, Assistant to the President, in writing "Introduction to Accounting," which was published by Wiley, Inc.

"Problems in Cost Accounting," published by McGraw-Hill Book Company, Inc., was the result of the joint authorship of Mr. H. C. Greer, formerly chairman of the Department of Accounting, and Assistant Professor Russell S. Willcox.

"Solutions to C. P. A. Problems," a companion volume to "C. P. A. Problems" (published in 1930), was prepared by Associate Professors J. B. Taylor and H. C. Miller and published by McGraw-Hill Book Company, Inc.

Mr. D. M. Shonting is the author of the section on "Budgeting" in the revised "Accountants Handbook," published by Ronald Press.

All of these texts have been well received, as evidenced by the adoption lists, record of single-copy sales, and the comments of reviewers.

In addition, several members of the staff contributed book reviews and articles on technical accounting subjects to the various accounting periodicals.

PARTICIPATION IN PROFESSIONAL ACTIVITIES

Associate Professor H. C. Miller and Mr. W. D. Wall, Lecturer in Accounting, have been active in the work of the Ohio Society of Certified Public Accountants.

Associate Professor J. B. Heckert and Assistant Professor R. S. Willcox have had an active interest in the affairs of the Columbus Chapter, National Association of Cost Accountants.

Associate Professor J. B. Taylor served as National President of Beta Alpha Psi, the accounting fraternity, during 1931 and occupies the position of Past-President at the present time.

Members of the staff have likewise contributed to the success of programs of the various professional and academic societies by acting as committee chairmen, members of committees, or by appearing as speakers on these programs.

DEPARTMENTAL ACTIVITIES

On January 1, 1930, Associate Professor J. B. Taylor was appointed Chairman of the Department to succeed Professor H. C. Greer, resigned.

The major activity undertaken by the Department as a whole, during the two-year period was the revision of the accounting curriculum. This revision was completed in the Spring of 1932 and was approved by the faculty of the College of Commerce and Administration. Approval of the Graduate Council and the Council on Instruction will be sought in the autumn.

The Department of Accounting also cooperated with the departments of Geography and Business Organization in the successful development of a graduate program for the three departments involved. The adoption of the program resulted in the establishment of the degree of Master of Business Administration.

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Department of Business Organization

CHANGES IN CURRICULA

During the two years covered by this report, very few changes have been made in the curricula of the Department. One important change, however, was the transfer of one-half of the work formerly covered under the head of Social Science 401 and 402 to the Department of Economics, where it is now offered under the head of Economics 400, Industrial History; the other half of the course was transferred to the Department of Business Organization, where it is offered as Business Organization 401, Introduction to Business. It is believed that experience has shown this change was wise. Other curricula changes have been minor in their nature with the exception of the fact that the Department has been able to develop more strictly graduate courses in the various fields of the Department. Specifically, the Divisions of Banking, Industrial Management, Finance, Marketing, and Transportation and Public Utilities are now offering definite graduate courses usually extending over two quarters of each year.

* * *

THE MASTER OF BUSINESS ADMINISTRATION DEGREE

For some time it has been felt that the time had arrived for the introduction of the degree of Master of Business Administration. During the year just closing considerable study has been given to problems involved in adding

such a degree, with the result that a specific program leading to that degree has been developed. This program has had the approval of the Graduate Council and the Council of Instruction. It is hoped it will be approved by the Board of Trustees and that it will be possible to begin to confer this degree by the end of the first year of the coming biennium. The Department has had a steadily increasing number of graduate students especially during the year just closed. It is believed that the introduction of this new program will be a valuable feature of the graduate work of the College and of this Department.

PRODUCTIVE CONTRIBUTIONS BY STAFF MEMBERS

Many of the members of the Department have been working on research or writing projects during the period covered by this report. Professor Willis Wissler published an interesting book under the title of "Business Administration." Associate Professor Ralph C. Davis published a book in the Alexander Hamilton Institute Series entitled "Purchasing and Storing." Professor T. N. Beckman published a revised edition of his book, "Credits and Collections in Theory and Practice." Professors Maynard, Weidler, and Beckman have just published a revised edition of their book, "Principles of Marketing." Professors Maynard and Weidler have completed a revision of their book, "An Introduction to Business." Dr. C. A. Dice has published a number of articles and has done considerable work on the revision of his text, "The Stock Market." Dr. Dice and certain other members of the College staff are preparing a new book in the field of Money and Banking. Dr. Kenneth Dameron has a fundamental text in Advertising well under way.

* * *

Department of Economics

COOPERATION WITH OTHER DEPARTMENTS AND COLLEGES

The past biennium has been marked by very genial relations with other departments in the College of Commerce and on the campus generally. Since very few persons ever specialize exclusively in Economics, the Department has been, and probably always will continue to be, one of the large service departments on the campus. It therefore must be constantly changing its curriculum to meet the demands of other departments, and this we believe has been accomplished in a satisfactory manner.

Particular attention should be called to the cooperation between the Department of Economics and the Engineering College during the past year. Engineers throughout the country generally are displaying an intense interest in the science of Economics, and a number of very valuable conferences have taken place here on the campus. The Federated American Engineering Societies, the central professional organization of the engineers, has been engaged in a study of the causes and effects of the economic depression and its possible cures. Representatives of these societies were sent to Ohio State University and were met by a combination group of engineers and economists. As a result of this meeting, the Department of Economics submitted to the Engineering Societies a rather lengthy appraisal of an earlier report by the engineers.

* * *

NO TIME TO CURTAIL ECONOMICS

This report would be very remiss if it failed to point out, what most persons readily admit, that now is not the time to retrench in either the teaching of economics or in economic research. Never in history has there been such a complete and convincing demonstration that the mere ability to produce goods is not enough to keep the economic system functioning. Manufacturers with all their production engineers and efficiency experts find their hands completely tied. Neither salesmanship nor advertising offers solutions to present-day difficulties. Whether economic science is well enough advanced to meet the situation may be a debatable question, but it is certain that no solution will be forthcoming without the application of economic principles. The Department is cognizant of its responsibility in the pressing problems of the day. Not only has it cooperated freely with various organizations in its scientific capacity, but a committee is now engaged in a re-examination of the entire curriculum of the Department, and of related curricula. If this study discloses the need for changes in course offerings, research plants, etc., they will be made regardless of the work entailed.

* * *

Department of Geography

The enrollment of graduate students continues to increase, as also does the registration of geography students in the Summer Quarter. Thus in the Summer Quarter of 1931 our registration was 250 as compared with 237 for the year before. Of these 250 registrations, 57 were from the Graduate School, and 118 from the College of Education.

Our regular staff has continued to show productive scholarship and research efforts as well as good teaching. Besides the research work on mountain geography which he has done, Professor Peattie has completed a revision of his elementary textbook on College Geography. Professor Carlson spent the summer in Washington, D. C., working in the Library of Congress and the Pan-American Union, putting the final touches on his book on Latin America.

The chairman of the Department completed a supplementary Geography of Ohio published by the Rand McNally Company to accompany their School Geographies. Each of the Instructors, Mr. Wright, Mr. Garland, Mr. Burhans, and Mr. Varvel, presented papers before the geography section of the Ohio Academy of Sciences at Delaware, Ohio, in April. Dr. Van Cleef was chairman of the section. Each of the members of the staff attended either the annual geographic meetings at Ypsilanti, Michigan, or the American Economic Association Meeting at Washington, D. C., during the Christmas vacation, several of them presenting papers on the program. The chairman gave an address before the geography section of the Ohio Educational Conference in April on Geographical Aspects of Education and Social Welfare. He was also honored by Governor White by appointment as delegate to represent Ohio at the National Drainage, Conservation, and Flood Control Congress, which met in Louisville, Kentucky, February 17-19, 1932. Professors Huntington and Van Cleef were appointed as delegates to represent the Ohio State University at the International Geographical Congress, which met in Paris, France, in September, 1931.

Department of Social Administration

The most important change that has occurred within the last year in this department is the assignment of a Chairman to the Department of Sociology and a Director to the School of Social Administration. Heretofore, these two organizations have been budgeted together under one administration.

A definite gain will be made in enabling each organization to work out separately the problems peculiar to it. At the same time there should be the closest harmony between the two organizations, as in a number of instances much will be gained by having teachers teach in the two divisions although they will be budgeted in one. The closest harmony should be secured in having them work out their cooperative problems together.

* * *

The importance of the field of health social work is such that other courses than those now given should be taught by the School of Social Administration. This is especially true with reference to the graduate students preparing for positions in executive social work. A special course or courses in health social work should be organized for their benefit.

The matter has been discussed with Dean Weidler and the President of organizing in Columbus a unit for the giving of supervision in field practice in social case work. Our undergraduate students are required before receiving an A.B. degree to secure the equivalent of a quarter's work in field work. Our students have been placed with social agencies in Cincinnati, in Dayton, in Cleveland, in Akron, in Pittsburgh, and other cities to do their field work. It should be possible for a larger amount of field work to be taken in Columbus. A time will never come when all of it can be done here, but Columbus should provide larger facilities for the teaching of field work in social case work. The Columbus Community Fund is willing to cooperate with us in setting up an organization whereby our students would have the supervision of the best case workers in Columbus. However, the School of Social Administration should employ a competent case supervisor and set up somewhere in a district in Columbus an elementary organization for the supervision of this work. This has been discussed with the President, and he has tentatively agreed to the plan as soon as funds can be provided for carrying it on. I sincerely hope that this plan may be put into effect beginning with the biennium of 1933-35, if not sooner.

As long as field work must be conducted in several other cities, definite provision should be made in advance to pay the traveling expenses of the supervisor of field work to visit these cities to aid in supervising the work. This provision should be made, it seems to me, not as a traveling expense, but as a teaching expense, because the work is exclusively a teaching proposition. If provision is not made in advance, it is difficult for the School to plan its work; and if these expenses are not met it will be impossible for the students doing field work in other cities to do the sort of work for which we should give credit.

* * *

In my last report I made the following recommendation, which I now wish to repeat and most seriously urge upon your attention:

Our most conspicuous problem at the present time is probably in the field of research. We need very much a Bureau of Social Research or an organiza-

tion which will head up this work here in the Department or in the School. There is a great interest at the present time in social research throughout Ohio and in this respect the University should take the lead. We have not been permitted to do so because of a lack of funds in the handling of the various research problems. We are called upon frequently to do pieces of work which we are unable to satisfactorily accomplish.

* * *

Placement Office

The following statement consists of a brief résumé of the activity within the *placement office* of the College of Commerce and Administration during the period, October, 1931, to June, 1932. In the absence of Professor T. E. Thompson, who normally has charge of this office, Mr. Keith Roberts has temporarily "filled-in," devoting approximately half-time to placement work.

As might naturally be expected, the business situation in general has manifested itself quite definitely in this office through a most discouraging decrease in calls for college-trained men and women. The following companies have from time to time, during the year, sent representatives to the campus for interviews, but in every instance they have come to purchase in a "buyer's market" and consequently have concerned themselves with only those men who have shown themselves to be unusually outstanding.

The Firestone Tire & Rubber Company
 Pennsylvania Railroad
 Wear-Ever Aluminum Company
 Westinghouse Electric Company
 Goodyear Tire & Rubber Company
 Columbus Gas and Fuel Company
 Institute of Meat Packing (Chicago)
 Continental Illinois Bank and Trust Company
 General Electric Company
 Minnesota Mutual Life Insurance Company
 New Process Rubber Company

This list does not, however, represent all those business houses which indicated an interest in our graduates. In addition to those companies sending representatives here, thirty-five others expressed a desire to have current graduates call at their offices. Among these were such companies as:

The Brown Shoe Company
 The Kroger Grocery and Baking Company
 The Hoover Vacuum Sweeper Company
 The Fred Sanders Confectionery Chain
 The Polsky Department Store
 The John Shillito Department Store
 Halsey, Stuart & Company
 Procter & Gamble Company
 Ohio Oil Company
 The S. S. Kresge Company
 F. & R. Lazarus Company
 Morehouse-Martens Company
 Addressograph Company

Although it is impossible to state definitely just how many men will have received positions within the next few weeks as a result of the contacts made through this office, it is certain that a very small percentage of the graduating class will have been placed. During the year the following companies employed one or more of our graduates:

Cleveland Vocational Bureau
 F. & R. Lazarus Company

J. Ralph Corbett (Radio Market Analysts)
Kroger Grocery & Baking Company
Firestone Tire & Rubber Company
Columbia Gas & Fuel Company
Allied Printing & Bindery Machinery Inc.
New Process Rubber Company
Davis & Young, Attorneys
R. H. Macy & Company
Goodyear Tire & Rubber Company

In several instances, the representatives who came here interviewed from fifty to a hundred students and chose only one or two from the group. Fifteen men have received positions to date. There may be others who have failed to report their employment to the office.

An attempt has been made to follow as nearly as possible the policies adopted by Mr. Thompson in the conduct of this office. Whenever possible, current graduates were given some preference in providing interviews with representatives from business. In some cases, however, older graduates were given preference because of most urgent need. There were some positions brought to their attention also for which graduating men could not have qualified since business experience was required.

Attempts were made from time to time to make new contacts as well as to follow up old ones. A very fine degree of courtesy was shown by both old and new companies contacted, but in the majority of cases they were forced to postpone any additions to their personnel. Most of these companies feel an obligation to their old employees who have been released temporarily and expect to reemploy them before they commence to look elsewhere. In a few instances it was apparent, however, that some of the companies were taking the opportunity of rebuilding their staff with younger men, getting rid of some dead wood and high salaries.

Unfortunately, there seem to be relatively few of our graduates who are willing to accept positions in which they will be remunerated solely on a commission basis. With the increased pressure on the distributive side of business, this office was able to offer many such positions. At the close of the Spring Quarter, this type of position was almost the sole offering the office could make. I do not feel, however, that the insurance companies and others making such offers hold the office to blame for the lack of interest in such work by those graduating.

From all indications, business men in the state are getting acquainted with this relatively new service the College is offering. They are cooperating as well as possible and will, I believe, increasingly avail themselves of the Placement Bureau as business conditions improve. If travel money can be made available to the Placement Manager in years to come, much can be done in the direction of building and cementing relationships with business men who will turn first to Ohio State when trained minds are needed.

W. C. WEIDLER, *Dean*

COLLEGE OF DENTISTRY

RESEARCH

In presenting the annual report for 1931-1932, it should be noted that our greatest developing activity is dental research.

Dental research at Ohio State University was started but a few years ago by Dr. Paul C. Kitchin, B.S., M.S., D.D.S. The following will show some of the more important projects with the various University associations.

1. The Bactericidal Efficiencies of Germicides Used to Eliminate Micro-Organisms Occurring in Putrescent Root Canals.

A part of the data collected under this project were reported by Mrs. Bernice R. Horton, of the Bacteriology Department, at the Washington meeting of the American Dental Association in October, 1929. Since that time further data were added, and the entire article was published in the *Journal of the American Dental Association* for September, 1931. Our conclusions regarding beechwood creosote as the most promising of the materials tested were not changed by the added data. Inoculations of organisms taken from diseased human teeth were made in experimental dog teeth and successfully grown in the dog teeth. When X-rays of the infected teeth showed rarefaction of the bone at the ends of the roots, treatments with beechwood creosote were carried on until cultures from the root canals were successively negative. This phase of the work required much time since it is difficult to secure this rarefied condition short of a number of months.

A criticism offered by other workers in root canal therapy regarding the limitations of beechwood creosote due to the fact that it coagulates the albumens of the tissue has induced us to undertake a laboratory study of such limitation. Material is now being assembled on this point and will be reported later. Mrs. Horton is collaborating on this work.

2. Histological Phenomena of Tooth Tissues as Observed under Polarized Light.

With the aid of a joint grant by the American Dental Association and the Ohio State University, the data previously reported on this project were checked, and an attempt was made to produce artificially the crystal phases described as found in tooth enamel in order to ascertain to what the differences might be due.

Under this same project Dr. Kitchin has carried on a study on the formation of enamel in the rat incisor. The data secured indicate that mass changes are responsible for the hardening of this tissue after it has been completely laid down in a soft condition. The various steps in the process have been described as they were visible under polarized light and photographs made. Dr. W. J. McCaughey, Department of Mineralogy, has aided Dr. Kitchin in this work. A report was made on this before the International Association for Dental Research at its Columbus meeting in March, 1932. It therefore will be published in the *Journal of Dental Research* soon.

The use of polarized light to disclose changes in enamel structure due to dietary causes, such as insufficient Vitamin D, but not a great enough deficiency

to be seen in forming bones, the pasteurization of milk, and the addition of sodium fluoride to the drinking water, is being carried on at present with the hope that enough data may be available to give a report before the American Dental Association in September next. Dr. R. D. McFarland of the Dental College is cooperating in this work.

3. A Study of the Rôle of Vitamin D in some Dental Diseases.

It is significant that we have been unable to produce dental caries in rats as a result of giving large amounts of finely powdered sugar in the diet either with or without Vitamin D. The work on older rats was repeated with young animals and carried over a long period of time with no success in production of caries.

Attempts to produce Vincent's infection in rats, also without success, may lead to new important findings. Major S. J. Randall, of the Army Dental Corps, stationed here at the Dental College, cooperated on both the above-mentioned subjects.

Similar work by other men has yielded similar results according to their publications.

4. Physical Properties of Denture Model Materials.

On this project we have succeeded in securing the cooperation of the Engineering Experiment Station. Mr. Frank E. Cook has been working under the direction of Dr. Withrow, of the Department of Chemical Engineering, on the project. The work is being carried on following a plan as submitted to Dr. Withrow by the Dental College. Lack of funds has hindered progress but in spite of that a preliminary report embodying work done on the expansion and contraction on setting of a number of materials has been made. This report was read by Dr. Kitchin before the International Association for Dental Research in Columbus in March, 1932, and will be published in the June number of the *Journal for Dental Research*.

5. The Hemolytic Qualities of Local Anaesthetics.

Dr. Kitchin and Dr. McFarland have carried on this investigation. This study showed a large variation in materials on the market and we believe has helped to prod manufacturers into the correction of their products from this standpoint.

6. In Relation to the Therapeutic Measures Useful in the Treatment of Vincent's Infection.

Dr. J. B. Brown, Department of Bio-Chemistry, has cooperated with Dr. Kitchin in advancing a new material intended to supplant chromic acid, which is a strong coagulant of albumen and thereby adds food for a saprophytic pathogenic organism which it is desired to eliminate. The substitute is a combination of sodium dichromate and boric acid. It has been tried on a number of clinic cases of Vincent's infection and proved generally, though not universally, effective. The results of this work appeared in the June number of the *Dental Cosmos*.

7. Dr. R. D. McFarland, College of Dentistry, reported on a method of obtaining uniformly thin ground sections of hard materials, such as teeth and bones, which has been worked out in the Dental Research Laboratory. The report was made before the International Association for Dental Research in March, 1932.

FACULTY ACTIVITIES

Some activities of the Faculty are as follows:

Dr. H. V. Cottrell served as president of the American Full Denture Association.

Dr. William C. Graham gave a Survey Report of Dental Materia Medica, at the 1932 meeting of the American Association of Dental Schools. He also served as a member of the Abstracting Committee and gave an Educational Report on Dental Students at the annual meeting of the American Academy of Periodontology.

Dr. W. D. Postle served as secretary of the Columbus Dental Society in 1930, as vice-president of the same organization in 1931, and as president in 1932.

Dr. Earl G. Jones read a paper on "Orthodontic Education" before the joint meeting of the Ohio State Dental Society and the Southern Society of Orthodontists, December 3, 1931, at Cincinnati, which was revised and read again before a research group in New York City, April 19, 1932. Another paper, entitled "What May be Considered Rational Methods of Orthodontic Therapy," was read before the American Orthodontic Society in Toronto, Canada, May 20, 1932.

Clinics on "Labial Aligning Appliance Attachments and Modifications" were presented before the following societies:

Ohio State Dental Society, Cincinnati, December, 1931.

Southern Society of Orthodontists, Cincinnati, December, 1931.

Dayton Dental Society, March, 1932.

Chicago Midwinter Clinics, January, 1932.

He was president of the Columbus Dental Society in 1931-32, chairman of the Committee on Education of the American Society of Orthodontists, and a member of the Executive Council of the American Society of Orthodontists.

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H. M. SEMANS, *Dean*

COLLEGE OF EDUCATION

Herewith is submitted the report of the College of Education for the biennium of 1930-1932. The several reports of the various departments have been prepared by departmental heads and are incorporated as submitted.

Attention is invited to the report of the Department of Practical Arts, wherein the congested condition due to increased demands through curricular requirements and mounting enrollments suggests that additional instruction be provided or drastic curtailment of service be authorized. During the past five years the undergraduate enrollment multiplied by 227 per cent, while the graduate enrollment multiplied by more than 2000 per cent. Meanwhile, the staff of the regular year has remained stationary. Dr. Stone refers to this situation as an impending crisis. The policy in the College has hitherto been opposed to the denial of any student the right of attendance. Since the legislature has failed to provide the necessary funds, it is suggested that the administration authorize the Department of Practical Arts to limit enrollment to those students who must fulfill curricular requirements and to additional students only in such numbers as the departmental facilities will admit.

SERVICE OF THE BUREAU

Attention is also invited to the varied and important service which the Bureau of Educational Research rendered to the educational departments of the University, and to a variety of technical and administrative problems without and within the College. Through the placement service of the Bureau, recommendations were made for approximately one-half of all vacancies in the public schools of the state. The services of the Bureau in managing the endless details connected with the conduct of the Ohio State Educational Conference and in editing the proceedings are invaluable. The success of our Conference is in largest measure due to the assistance of the Bureau.

In editing the *Journal of Higher Education*, the *Educational Research Bulletin*, in conducting the Institute of Education by Radio, and in editing the proceedings of the Institute, the Bureau is rendering conspicuous educational service and bringing the Ohio State University to the favorable attention of many sections of the United States. More than 100 college presidents subscribe to the *Journal of Higher Education*.

Through the Bureau Library more than 5000 books, pamphlets, etc., and more than 300 issues of periodicals have been added without expense to the University. Columbia University recognized the outstanding merits of the Bureau's catalogue of 200,000 titles when at great expense it requested permission to duplicate this catalogue. Chicago University following Columbia has adopted the system inaugurated by our Bureau.

The Achievement Test Division under the able direction of Dr. Tyler has won nation-wide recognition. The technique developed in our Bureau is being widely adopted by colleges and universities. Dr. Holy of the Survey Division, aided by Drs. E. W. Anderson and H. H. Davis, recently completed an important service to the Cleveland Schools upon the joint request of the Cleveland Federation of Teachers and the School Board. They were successful in harmonizing these two organizations to the complete satisfaction of both.

In a period of three years the Bureau has been engaged in completely overhauling the courses and curricula of the College of Education. Many changes and economies will result as a consequence of this thoroughgoing piece of work.

It is no exaggeration to say that the Bureau of Educational Research is rendering a greater variety of fundamentally important educational service throughout the state and within the University than any other organization in the College. A detailed reading of the entire report is strongly recommended.

The Department of Adult Education, although greatly restricted, continues to serve a large clientele throughout the state by means of its Bulletin, lectures, and correspondence. During the period of the biennium, campus instruction to advanced students was offered in one undergraduate and five advanced undergraduate and graduate courses. In addition large numbers of non-credit students were enrolled in parent groups in various parts of the state.

The Department of Special Education is greatly in need of addition to its staff. Until this necessary assistance is provided by the state, the objectives of the Department as contemplated in the law are unrealizable.

FINE ARTS BUILDING NEEDED

The departments of Fine Arts and Music experienced a decided increase in enrollment. Both departments are in congested quarters, the work of the latter department being distributed to several buildings on the campus, while the former is greatly in need of an exhibition room of large proportions. A Fine Arts building is greatly needed to house this widely scattered work. Increased enrollment in the Department of Music is an ever present problem. Limitation may be necessary in the near future.

The Department of History of Education continues to serve a large number of students. There has, however, been a small diminution of enrollment which enables the Department to carry its program without serious difficulty.

The practice teaching situation in the Department of Principles continues in undiminished aggravation. Supervision, in any real sense, under present conditions is done very badly. The patience of the city school administration and the indulgence of the public-school teachers, under whose guidance our student teachers do their practice work, are commendable. This situation is likely to result in serious difficulty if permitted to continue.

Retrenchments in the Department of Psychology were drastic. The number of elementary sections was greatly reduced and the size of classes greatly increased. Certain of the laboratory sections are too large. The non-laboratory sections, if increased beyond their present size, will gradually be converted into lecture sections, thus eliminating in large part the recitative method.

The necessary retrenchment fell most heavily upon the psychological clinic. The assignment of Dr. Stogdill to a full teaching load, the illness of Dr. Luella Pressey, and the partial withdrawal of Dr. Durea so seriously invaded the work of the clinic as to suggest abandonment; and more especially since Drs. Goddard and Maxfield were occupied with heavy demands in the advanced undergraduate and graduate areas. It is a pleasure to acknowledge the loyalty of the staff and the generous manner in which the staff devoted extra hours of service over and above the full requirements of teaching. The President in sympathetically reviewing the situation approved the restoration of two part-time assistants, thus making it possible to continue the work of the clinic.

COUNCIL ON GRADUATE WORK

Attention is invited to the report of the Department of School Administration. The growth of this department on the graduate level is phenomenal. The enrollment is so large and the consequent number of theses so great as to preclude the possibility of adequate supervision and instruction. This should be considered when the work of the department is critically reviewed.

The establishment of a Council on Graduate Work in the College of Education is a distinct educational advance. The enormous increase in graduate work made imperative a new organization in which the student is given greater autonomy and responsibility in the determination of his program. Moreover, specialization in many of the departments had reached detrimental lengths. For quite some time, the Faculty has been concerned with the excessive amount of supervision and responsibility assumed by the professor which, as already indicated, should rightfully be assumed by the student, who presumably has reached maturity of judgment. Under the new procedure it is expected that a considerable fraction of the professor's time will be released from the necessity of doing for the student what he should be expected to do for himself.

The University Secondary School will open in the autumn of 1932. With its establishment the College of Education for the first time is in possession of needed laboratory facilities. Columbia and Chicago Universities, and practically all state-supported colleges and universities have long possessed similar laboratory schools in which theory and practice are closely related. Attention is invited to the extended report of the Director of University Schools.

The congested condition that has existed in the Education Building for a number of years has been reported previously. The increase in undergraduate and graduate work during the last two or three years has added to the congestion. It is hoped that a new wing on this building will be added as soon as the appropriations will admit.

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Department of Adult Education

COOPERATION WITH THE STATE DEPARTMENT OF EDUCATION

The enterprise in adult education undertaken in 1928 was set up as a joint experiment between the State Department of Education and the University. In May, 1930, the Board of Trustees made the experiment a permanent part of the University program by establishing a Department of Adult Education.

The activities which were shared between the State Department and the University included the Parents' Laboratory Pre-School, *The Better Parents Bulletin*, non-credit leadership training courses, preparation and distribution of study materials, and field work by the chairman of the Department.

Credit courses for regular and special students, University committee work, and participation in Freshman Week are examples of activities carried on specifically for the University.

In the two years 1929-1930 and 1930-1931 there was a considerable increase in the demand for the departmental offerings, which was met by a large increase in the budgetary grants by the State Department. Even with a new Pre-School building and enlarged staff the waiting list of pupils was always larger than the accommodations available; requests for *Better Parents Bulletins* had to be refused daily; requests for speakers were far in excess of our resources, as was the case with the requests for study material.

The end of the year 1930-1931—the third year of the work—gave every evidence that most of the activities which had been developed were performing important services, and revealing large and fundamental social needs.

The change in the administration of the State Department of Education, and the all-round reduction in budgets for education terminated the cooperation of the State Department with the Department of Adult Education. The cutting off of this support closed the joint activities entirely, and on July 1, 1931, all contracts with the State Department and staff members expired. A summary of this three-year period is hereby presented.

SUMMARY OF THREE-YEAR PERIOD DURING COOPERATION WITH STATE
DEPARTMENT OF EDUCATION—1928-1931

Extra-mural services

Meetings addressed by staff.....	394
Leadership institutes (1-3 days).....	40
Off-campus courses	14
Attendance	23,864
Radio talks	295
Conferences attended	52

Campus activities (omitted)

Office services

Letters received (estimated)	2,602
Letters written (estimated).....	2,992

Materials distributed

<i>Better Parents Bulletin</i> —Address list limited to 4,000
Radio Program packets
Radio course syllabi
Announcements
Bibliographies
Lesson outlines (mimeographed)

* * *

MAJOR PROJECTS, 1931-1932

After the termination of the cooperative arrangement with the State Department of Education, and the cessation of the joint activities, the problem of the chairman of the Department became that of inventing some way to "carry on" without any of the structure outlined at the inception of the work and in process of building over the three-year period.

The following plans are being used:

1. Energy is concentrated on preparing aids to leaders of study groups, and study materials for the members.
2. State contacts are being preserved by various devices, among these being form letters, a group registration plan, and personal correspondence. (Staff periodical had to be discontinued.)
3. Cooperative efforts have been increased toward working with state and local groups, such as the Franklin County Court of Domestic Relations, Franklin County Council of the Parent-Teacher Associations, the Ohio Child Conservation Leagues, the Y.M.C.A. Boys' Work Secretaries, the State Department of Public Welfare.

A system of inviting key persons in other towns to become our local representatives has not been pushed, but is fairly successful, especially in Toledo and Youngstown.

CONCLUSION

The biennial activities of the Department of Adult Education have revealed a tremendous demand for the work. At present no organization is responsible

for financing any of the much-needed programs; there is no training school for leaders; and the materials in most of the fields are unsuited to adults and wholly inadequate for the particular function of educating adults. Textbooks for illiterates and foreigners are nearly all adaptations from texts used in the grades with children; reading guidance is in the hands of professional librarians unskilled in psychology; tradition, newspaper columns, and magazine articles are the main sources of information for child training, and so with other fields. A university service for volunteer groups seeking further education is the first step in the direction of a complete state-supported program of education for all—adults as well as children.

The next step will be to provide equal opportunities for education; followed by the training of leaders, and accompanied by the construction of appropriate materials for study.

The Department of Adult Education is attempting to maintain the integrity of the work, so far as possible, by contacts through the written page. No other equally fruitful resource is available, since the staff is reduced to a chairman and an office assistant. Without other stimulus than this rather impersonal service, more than 2500 have been in continuous relation to the Department during 1931-1932.

Bureau of Educational Research

During the current biennium the Bureau of Educational Research has performed the following services:

MAJOR PROJECTS

1. It has maintained the largest teacher placement service in the state for the benefit of the schools and colleges of Ohio. It received requests to recommend candidates to fill 1,582 positions in 1930 and 916 positions in 1931. The 916 requests for 1931 are divided as follows:

College positions	226
High-school teachers	512
Elementary-school teachers	47
Administration	27
Negro teachers	73
Miscellaneous	31

Significant is the large proportion of college positions to indicate the strong place that the Ohio State University holds as a source for instructors for colleges and universities. Significant also is the fact that of approximately 1,000 vacancies in high schools in Ohio each year, the Appointments Division was asked to make nominations for approximately 500, or one-half of all positions open. This was done in competition with commercial agencies and appointment offices in the other state institutions and private colleges.

The Appointments Division's services to teachers are not confined to students and graduates of the College of Education. It is a service agency for students of all colleges and the graduate school. Last year it had on its active list 2,637 candidates. Owing to the depression, which recalls former teachers to the profession and develops caution among teachers who otherwise might leave positions, the number of vacancies and the number of persons placed was smaller than usual. Forty-nine per cent of the graduating class of 1931 was placed.

2. The Editorial Division has experienced a very heavy biennium. The number of printed pages edited and published approximate the rather enormous total of 5,250. Each year eighteen issues of the *Educational Research Bulletin*, constituting 500 pages, were sent to 6,000 readers, a large number of whom live outside of the state of Ohio and some of whom are found in practically all civilized countries. This journal publishes the results of investigations made in the College of Education.

Nine issues of the *Journal of Higher Education*, containing approximately 530 pages, were printed each year. This journal has national circulation, and is supported by subscriptions and advertising, without subsidy from the University since its initial stages. College presidents to the number of 145 are subscribers. Of 59 significant articles reporting experiments in higher education, 32 have appeared in the *Journal of Higher Education*, and 27 in all other magazines.

The editorial office published the *Proceedings* of the Ohio Educational Conference and of the Institute for Education by Radio. The latter has, for the two years of its existence, been included among the starred titles in the Sixty Best Books in Education for the year.

Eight educational research monographs have been printed during the biennium. In addition, the Division is of assistance in editorial matters to many persons in a wide variety of ways.

3. The Research library added 28,000 cards in 1930 and 26,300 cards in 1931 to its subject-heading catalogue. Initiated ten years ago, this is the best educational research catalogue in the world. Its subject headings were adopted by the Educational Index, and just recently the Teachers College of Columbia University has asked permission to send typists to the library to copy, card by card, the 200,000 titles in our library—a task which would require about twenty months time of one stenographer. The Department of Education of the University of Chicago began, in 1931, to keep a similar catalogue.

To the Research Library has been added during the biennium 5,802 professional books, pamphlets, reports, and the like, and current issues of 310 periodicals. This is a complete list of all important educational periodicals published in America, and many from foreign countries. All this material is added to the library without appropriation from the University for that purpose. It is secured largely as exchange and review materials for the *Educational Research Bulletin*.

The services of the Research Library were used by professors, graduate students, and undergraduates, and to an unusual extent by school people in the state. The average weekly attendance is 298. Graduate students or professors seldom work on investigations without using the Research catalogue in discovering what has been written on the subject.

4. The Division of Achievement Tests is breaking new ground in objective testing by devising tests for objectives other than the gaining of mere information. The Bureau occupies a position of national leadership in that field. Seventeen departments on the campus are using its techniques. The American Council on Education is using in all its cooperating colleges and universities in the nation, the tests which are being constructed here. The University of Chicago has made persistent overtures to the head of this division in the hope of developing an effective program of instruction improvement. This is gratifying even though somewhat embarrassing.

5. The Survey Division has, during the biennium, made a study of teach-

ers' salaries for the Cleveland Federation of Teachers in cooperation with the Cleveland Board of Education. This thorough study has been a basis from which the differences between the Federation and the Board of Education have recently been harmonized.

In addition, the Division has made school building surveys for seven school systems and has performed a wide variety of miscellaneous services, chief among which are the last steps in a state-wide survey of rehabilitation for the State Department of Education.

6. The Curriculum Division has completed to a point of usefulness, although not to a condition of polished perfection, a unique vocabulary difficulty list by which teachers and textbook writers can learn what percentage of the children of the grades they are addressing knows the meanings of the words the teachers and authors use. This instrument is as useful for elementary education as the Babcock tester has been for the dairy industry.

It is cooperating in the Payne Fund study of the influence of moving pictures on children by contributing three studies, with financial support from the Payne Fund.

It has, with the use of job analysis techniques, assisted the College of Veterinary Medicine to reorganize its curriculum, and is beginning to assist two departments in the College of Agriculture. For three years it has directed the reorganization of the curriculum of the College of Education. With the State Department of Education it has cooperated in the setting up of a curriculum in health and physical education in the high schools of Ohio. This last service involved extensive investigations, which cost the Bureau in time and service approximately \$1,400.

Numerous informal services of wide variety have been rendered.

7. The Personnel Division has conducted as its chief research project the compilation of a distinctive personnel bibliography, involving a new type of classification. In advance of publication enough copies have been ordered outside the state of Ohio to pay for the cost of publication.

The Division has undertaken seventeen investigations for the Temporary Personnel Council in connection with campus activities.

Mention should be made of a number of valuable services rendered by the head of this division—the executive direction of the Ohio Educational Conference assisting Dean Arps, responsibility for the *Journal of Higher Education*, investigations for the junior deans, preparation of high-school guidance materials, and the like.

8. The Radio Division is now in its first year. While its plans have been definitely formulated, no studies have been completed. The funds for this division are provided entirely from outside sources by a citizen of Ohio, Mrs. C. C. Bolton, Cleveland, through the Payne Fund. The outstanding accomplishment of the Bureau in the radio education field is the annual Ohio Institute on Education by Radio at which are assembled each year the leaders in radio education connected with both college and commercial stations.

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COLLEGES TO WHICH STAFF MEMBERS HAVE RENDERED SERVICES TO A GREATER OR LESS DEGREE

College of Agriculture	College of Engineering
College of Arts and Sciences	College of Law
College of Commerce	College of Veterinary Medicine
College of Education	The Graduate School

The Bureau has had no direct contacts with the Colleges of Dentistry, Pharmacy or Medicine. However, the Director as the adviser of the Committee on the National Reorganization of Dental Curricula is helping to construct a curriculum for Public Health Officers in Ohio, in which the College of Medicine is interested, and three years ago made a study of the curricula of Colleges of Pharmacy for the Commonwealth Fund.

DEPARTMENTS TO WHICH STAFF MEMBERS HAVE RENDERED SERVICES

Technical assistance has been given to thirty-five departments on the campus during the past two years. It is to be definitely understood that the Bureau has not performed all the work which has been done. Neither has the Bureau solicited opportunities to serve. It has confined its efforts to those departments which, working upon problems, have sought such technical assistance as the Bureau is prepared to give. Particularly extensive work has been done with the Departments of Botany, Zoology, and Home Economics.

TEACHING

While the Bureau is not a teaching organization, the members of the staff participate in teaching in order to give the advanced graduate students the cream of what they learn from investigations. They teach about forty quarter hours. This is more than the equivalent of the teaching time of one full-time instructor. But for purposes of graduate instruction, the variety and richness of scholarship which can be provided by eight men in forty hours is quite superior to that which can be provided by a single man in the same length of time.

OUTSIDE FINANCIAL SUPPORT

During the four years that the Director has been in charge of the Bureau, funds from outside sources for research have been provided to the total of about \$55,000; and \$15,000 a year is at present assured for the next four years. The relation of these large sums is significant when considered in connection with the support of the Bureau's personnel and in particular relation to the Director, upon whose judgment these gifts are appropriated. Such gifts are eagerly sought by all higher institutions of learning and represent an amount two or three fold that of the Director's compensation.

Bureau of Special Education

During the year 1930-31 the director of the Bureau of Special Education devoted his time to organizing the Bureau and to making contacts with the public schools and with state and national organizations interested in the problems of special education.

The Bureau of Special Education is directly concerned with the early discovery, treatment, training, and instruction of all types of exceptional children (the handicapped and the gifted), and with the discovery and removal of the causes which handicap children.

The organization of the Bureau provides for the following three divisions: field service, teacher training and research.

FIELD SERVICE

As the function of special education is to help the exceptional child to help himself, so the function of the division of field service is to help the community

to help itself with respect to the care, treatment, and training of its exceptional children.

The director visited upon request twenty-three counties in the state to confer with school officials or judges and probation officers in regard to the treatment and training of exceptional children, or to speak to organizations interested in special education.

Information secured from visits to schools in many different parts of the state and from conferences with school officials, juvenile court judges, and members of the state departments of education and welfare indicates:

1. That teachers and principals of elementary schools do not feel as responsible for the education of the handicapped child as they do for the education of the child who is not handicapped.
2. That only a small percentage of the handicapped children in the public schools of the state is being given the type of education best suited to the needs of these children.
3. That much that could be done by the grade-school teachers for the handicapped is not being done.
4. That educational provision for handicapped children varies greatly from community to community.
5. That special education for gifted children in the early grades is provided in very few school systems.
6. That many of the smaller communities need and desire assistance in the selection of the children who require special education.
7. That few superintendents and principals know what equipment is necessary, and what changes should be made in the traditional course of study, to meet the needs of the exceptional child.
8. That superintendents, principals, and teachers are very appreciative of concrete suggestions in regard to the training and instruction of the handicapped children in their schools.
9. That few grade teachers in the elementary schools have had any special training in teaching exceptional children.
10. That there is a great need for adequately trained special-class teachers.
11. That due to the industrial depression, it is impossible to provide special class teachers if to do so means increasing the number of teachers.
12. That handicapped children are rarely assigned to special classes until after they have failed repeatedly.
13. That only teachers who have had successful experience in teaching normal children and who are genuinely interested in the exceptional child should prepare to teach special classes.
14. That the problem of special education in many small communities is complicated by semi-annual promotions.

From the above it is evident that a traveling clinic is much needed in the smaller communities to assist in the early discovery of all types of exceptional children, to make recommendations in regard to treatment and training, and to show how these recommendations can actually be carried out in the particular community at a minimum cost.

The director has been very much pleased and encouraged by the assistance he has received from the State Department of Education, the State Department of Public Welfare, the Ohio Public Health Association, the Ohio Institute, and the Ohio Mental Hygiene Association in organizing the work of the Bureau.

Through the influence of these organizations he has received requests for his services from many parts of the state.

TEACHER TRAINING

For teachers preparing to teach mentally retarded and behavior problem children, the following new courses were offered during the Summer Quarter of 1931:

Principles and Methods of Teaching the Mentally Retarded
Organization and Administration of the Education of the Mentally Retarded
Organization and Administration of the Education of Behavior Problem Children

RESEARCH

There are few fields in which research on practical problems is more urgently needed than in the field of special education.

At the request of the President of the Ohio Deaf Mute Alumni Association, the Bureau of Special Education prepared a report on the data secured from a questionnaire which was sent out to the deaf in several states by the President of the Ohio Deaf Mute Alumni Association. The information secured from this questionnaire indicates very clearly the need for careful scientific study of the course of study and methods of instruction now used in schools for the deaf.

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Department of Fine Arts

In order to justify itself as a phase of University activity, fine-arts instruction should be available to all students whether or not they adopt art as a profession. This facility is furnished by dividing instruction into two fields, background courses and areas of specialization. All students take the background courses, and if they then decide to major in Fine Arts they enter one of the highly specialized areas which lead to professional accomplishment. In this way the Department is able to fulfill its function as a cultural influence and to provide training for the development of artists. There can be no doubt that this program is acceptable to the student body as the enrollment continues to increase, and while this is more marked in the number of students taking the background courses there is also an appreciable increase in those concentrating in special work. The greatest number of enrollments comes from the College of Education, with Arts and Sciences, Agriculture, Engineering, Commerce and Administration, well represented and an occasional student from the other colleges.

Three lecture courses on appreciation form an introduction to Fine Arts for beginning students. The one-hour credit courses seem to meet certain demands from students who have no other contacts with the Fine Arts. It is felt that they are justly open to the criticism of all such survey lecture courses where there is little opportunity of personal contact between student and instructor. Close attention to proctorship and sympathetic encouragement to students to hold conferences would greatly augment the work of the lecturer.

Beginning laboratory courses without prerequisites are also offered as it is believed that a definite contribution to the cultural development of the University can be made through the intelligent teaching of so-called technical subjects as well as through the use of art history and appreciation. With the release of creative instincts along well-directed channels of artistic production

comes a greater capacity for understanding and enjoyment in the whole field of art. The cultural development and technical training combine to produce the intelligent professional artist, and students who show special aptitudes in the foundation courses may continue with majors in the various special fields.

The special fields for specialization are teacher training, sculpture, landscape architecture, ceramic art, illustration, painting, design, commercial art, and history of fine arts. A significant fact in this connection is the large enrollment in graduate courses as indicating the demand for advanced instruction.

TEACHER TRAINING

The teacher training curriculum prepares teachers for public schools, universities, and museums. Instruction in this field has been greatly helped by the cooperation of the Ohio State Archaeological and Historical Society through Mr. Shetrone who has placed the facilities of the Museum at our command and given our prospective teachers an opportunity to secure training in the use of museum material in teaching. This has been especially valuable in preparing students for museum positions, a field which is increasing in importance and in which we have placed a number of graduates. The public schools of this and adjoining states continue to take the teachers we have prepared, and the success of our students is a matter of general satisfaction in this area. Other colleges and universities take our graduate students; of the 1931 group, six found positions in other institutions.

It has been found that motion pictures can be used to great advantage in the public schools in creating an interest in drawing. This phase of art teaching has, therefore, been included in the work given our prospective teachers, and while still in the experimental stage has already shown gratifying results. The films used in these experiments are staged and photographed in the Department. The subjects are varied, consisting of animals, figures in action, process films of armour-making, puppet construction, staging of puppet plays, and the use of various implements by the early mound builders. In all these films the value of the drawing subject is kept uppermost in mind; and the elements of composition, rhythm, and balance are included as well as interesting subject matter. The films are being used in elementary and advanced drawing classes to teach freedom of line and action. The design classes use them to interpret moving figures by abstract motives. The clay modelling classes use them as the inspiration for quick sketches in clay. Teacher training students are given practice in the use of these films and their applications to high-school problems.

The Department has added two courses in methods for teachers preparing for positions as supervisors in the elementary schools. These were introduced at the request of the Department of Principles to add to the cultural background of these students and to enable them to give fine-arts instruction in schools where no fine-arts teacher is provided. The courses include an historical survey, practice in the use of materials, and experience in the organization of projects. The principles and application of art in elementary education furnish a means of developing creative ability as an adjunct to the learning process, and stress is laid on the relation of art to specific subjects in the elementary curriculum.

* * * CERAMIC ART

Instruction in Ceramic Arts has made progress during the past two years, both in number of students enrolled in the various courses and in quality

of work done. The registration of Ceramic Art major students remains small, perhaps because of unfavorable industrial conditions which at present do not offer great promise of ready employment in the field. The courses are, however, becoming increasingly popular as electives among students in Fine Arts, Practical Arts, and Ceramic Engineering. Prospective teachers in Fine Arts and Practical Arts by taking these courses are able to add an elementary knowledge of pottery making to their other preparation. This will be an asset to them not only in broadened general knowledge but in their work as teachers. Many high schools and private schools are offering simple pottery work, and few teachers are prepared to handle it. Two seniors were graduated in June, 1931, the first students to complete the four-year course. Both of these men are at present employed by industrial plants, one in Ohio, the other in Texas. The division has produced creditable research work in glaze composition and decorative process technology. Mr. Edgar Littlefield, technical and research assistant, has done excellent work in glaze development. In the May, 1932, number of the *Journal of the American Ceramic Society*, the reports of two of these researches are published. Other glaze and body researches, one by a senior student, Mr. Leslie Moody, have been presented at the annual meeting of the American Ceramic Society.

PERSONNEL STRENGTHENED

The personnel of the division has been greatly strengthened by the part-time service of Mr. Carlton Atherton, who handles several courses. He brings to the students not only a specialized technical knowledge but a fine taste in design which is of great value to the whole division. Interesting special studies in ceramic decorative processes combined with ceramic art history have been carried on by two graduate students this year. One has investigated Egyptian Ceramic Jewelry and the other has attempted the reproduction of Italian lustered majolica. Both students have produced interesting results, and these studies are typical of many which may be carried out with profit in the future.

Students and instructors have been represented in several important exhibitions of Ceramic Art during the last two years. Among these are the annual displays of the art division of the American Ceramic Society. In 1931 at Cleveland three awards were given to exhibitors from our group. In 1932 at Washington no prizes were awarded, but the Ohio exhibit was recognized as being of high quality. Seven exhibitors from this division were represented in the national exhibit of Contemporary American Ceramics in New York. Three exhibitors have work in the current exhibition at Syracuse, New York. One student has had an individual display at the Rochester, New York, Art Gallery. At the current exhibition of Fine and Applied Arts at the Cleveland Museum, Paul Bogatay of our division received second prize for ceramic sculpture.

An interesting development is the fact that the W. S. George Pottery Company, of East Palestine, Ohio, has offered prizes for tableware designs by students of the Department. These designs are now being completed and awards will be made next month. Such industrial interest in the work at the University is to be encouraged.

Through the generosity of the General Education Board of the Rockefeller Foundation, the Department was able to secure Mr. Paul Bogatay as a research assistant to carry on special work in Ceramic Art. This grant was promoted by the Art Division of the American Ceramic Society because of their belief in our ability to make a contribution in the field of chinaware production. This study has furnished an opportunity for very helpful contacts in the commercial

field, and the producers have offered extended cooperation in the matter of information and technical assistance.

The first step in the study was the making of two series of working drawings of the important standard items of semi-vitreous dinner service. Both round and square shapes were studied and presented in simple basic forms. Blue prints of these drawings have been sent to all manufacturers of semi-vitreous wares and hotel china. Reproductions of the drawings have been published in the bulletins of the American Ceramic Society and in the trade publications. Following these a series of drawings was made to illustrate the simple method for the development of ceramic shapes by varying the proportions and the detailed treatment of single fundamental forms or combinations of related form. Charts were made of several items of a dinner service, each of which was varied through six or more modifications. These represent a demonstration of a useful, orderly method of attack on the problem of shape construction. Five charts of these variations were reproduced and sent to all tableware manufacturers. Reproductions were also published in the January, 1932, number of the American Ceramic Society Bulletin. As the next step growing out of this study, the application of ornament to the shape was considered. Twelve variations were made which were eventually produced under plant conditions through the cooperation of the manufacturers.

An interesting phase of this work was the production of the series of college service plates which were designed by Mr. Bogatay and are now being produced by the Shenango Pottery, of New Castle, Pa. The program included the study of patterns for decalcomania and printing and the application of glazes and textures to plain and embossed ware. It is not expected that this two-year effort will directly result in any revolutionary effect on tableware design. It is hoped that it will help other designers in meeting the specific problems which the subject involves. It is an essential step in the program of training better designers and consequently producing better wares in the United States. That industrial men are interested in the study is shown by their willingness to help in carrying out this subject. Both the U. S. Potters' Association and the Ohio Ceramic Industries Association have passed resolutions endorsing the program and recognizing the progress made.

* * *

GRADUATE WORK

The presence of an unusual number of graduate students in the painting courses has permitted a high standard of accomplishment. The fact that technical proficiency is becoming so generally a requirement for teachers in universities and colleges leads students to return after graduation for more laboratory work and in many cases to remain long enough to obtain a Master's degree. It is significant that of the six students who were placed in universities and colleges in 1931, five had received advanced degrees and five had majored in the technical field. The history of fine arts is a requirement for these positions, but the day of the fine-arts teacher whose only asset is a knowledge of the history of his subject is evidently passing. The presentation of a thesis in the technical field of Fine Arts involved some new problems necessitating a departure from the accepted procedures. The Graduate School has recognized these conditions and through its hearty cooperation has made possible the preparation of theses in painting, design, sculpture, or ceramics. The Department has insisted that such theses shall include a certain amount of history and that the requirements for a Master's degree shall include at

least fifteen hours of advanced research in history. Fine Arts offers an exceptional opportunity for this combination. At present three candidates are working on such problems—two in ceramics and one in painting.

In addition to instructional work the Department has been able to render various services to the University and to the State. These include: reports and blue prints to the ceramic industries; landscaping plans for the campus and for the Ohio State Archaeological and Historical Society; interior decoration of the new Laboratory School Building and of the Ohio Union; lectures, radio talks, advisory service and conferences on art education for educational institutions and for individuals.

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Department of History of Education

COOPERATIVE ACTIVITIES

A review of the activities of the Department of History of Education for the past two years has directed attention to their cooperative character. Many of them can be most clearly presented under this title.

COOPERATION AMONG MEMBERS OF THE INSTRUCTIONAL STAFF

The seminars during the period under consideration have been conducted cooperatively by the members of the staff. In some instances those not on campus duty have taken part. During the earlier meetings of the seminar, while the student members were engaged in collecting data, it has been the practice of the instructors to present reports on the studies and investigations in which they have been engaged outside of their regular instructional duties. One of the several advantages of this plan is that it enables each instructor to keep in touch with the study and research activities of his colleagues.

COOPERATION WITH OTHER DEPARTMENTS

Increased cooperation with other departments has been a marked feature of the work of the biennium. For some years past instructors in charge of the work in American educational history have been serving as advisers to students engaged in lines of research in school administration more or less historical in character. Mr. Eckelberry has been especially active in this work. During part of the period Mr. Good, cooperating with Mr. Lewis of the Department of School Administration, has organized and conducted a special seminar for such students.

For students specializing in the Department of Music Mr. Eckelberry has organized a special section in the history of modern education.

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COLLECTION AND CONSERVATION OF SOURCE MATERIAL ON THE HISTORY OF EDUCATION IN OHIO

During the past two years Mr. Good and Mr. Eckelberry have continued their activities in collecting and filing source material relating to the history of education in Ohio. Among the documents secured are the originals or photostatic copies of teachers' contracts, teachers' certificates, registers, minute books, etc. dating from the early nineteenth century. Additions have been made also to the departmental collection of early textbooks. This growing collection, it is hoped, will serve as the nucleus of an educational museum organized somewhat on the plan presented in a departmental memorandum some years ago.

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AIMS AND PROCEDURES IN GRADUATE WORK

In its relations to graduate students, the Department has recognized that a major part of the benefit which the mature student derives from his work arises from the exercise of initiative and the bearing of responsibility in the selection of fields of investigation, of methods of procedure, of courses, books and other aids to the attainment of his goal. It endeavors to avoid the reproach so frequently directed by Europeans against American universities, namely, that the students are kept in leading strings far beyond what should be the age of intellectual and moral maturity.

The light enrollment in certain of the courses for graduates and advanced undergraduates, especially in those courses with a four-hour weekly schedule, is still a matter of concern to the Department. Attempts are being made to seek out the causes and, so far as possible, to remedy them.

A RE-EXAMINATION OF AIMS IN THE PROFESSIONAL TRAINING OF TEACHERS

Staff conferences held during the biennium in connection with the general survey of the College of Education curricula have revealed a gratifying unanimity of opinion as to certain features of the professional training of teachers considered to be deserving of special attention. One of these is the cultivation of catholicity of interests.

As one professionally engaged in aiding the young to an enrichment of their lives, it is only reasonable to expect of the teacher in the non-professional school that he should himself maintain a somewhat more zestful attitude toward life than others. His professional duties demand of him that he should possess keener and more varied interests than do those engaged in other callings. Whether this requirement has been met by the rank and file of the teaching profession may be seriously questioned. In fact, the charge has been made and is still made that the teacher is frequently lacking in just this qualification. Montaigne charges the teacher with dullness and ineptitude, and, more paradoxical still, ascribes this largely to the professional preparation in vogue in his time. W. C. Hazlitt declares that "The teacher in all ages has been a prosaic and unimaginative being." Of the teacher today H. L. Mencken declares, "Nothing is in him save the ghostly echoes of other men's thoughts and feelings."

To what extent are present-day systems for the professional preparation of teachers contributing to render self-evident the falsity of such charges as these? There is little doubt that, following the direction pointed out by Rousseau and Pestalozzi, they have greatly developed the teacher's interest in the nature of the child and the adolescent, as well as in the mechanism and the processes of our modern educational systems.

But is there not a danger of this being done at the expense of breadth and intensity of interest in subject matter with which the student-teacher is to deal? Instructors in this Department are endeavoring to avoid this danger and, through careful attention to correlation of their work and through other means, to maintain in themselves and in their students freshness of interest in the various aspects of life represented in the ordinary curriculum of the secondary school or college.

* * *

Department of Music

During the two-year period, a beginning has been made in a course leading to the degree of Bachelor of Music. This curriculum for the present is

limited to training for performance ability in singing. At the time the Department of Music was authorized, this phase of music instruction was represented to the chairman by the Board of Trustees as a very desirable part of music activity on the campus. The staff seconds the opinion of the Trustees and is glad to report a beginning in performance curricula, although an insufficient teaching staff at the present sharply limits activity in this direction.

APPLIED MUSIC

Due to limitations in teaching staff, the Department has been unable to make satisfactory progress in giving to students majoring in music the amount of applied music absolutely required to make a successful teacher of school music. This point is further discussed later in this report under the head of Departmental News.

ADDITIONS IN HOUSING SPACE

Old Athletic House.—During the past four years, or since the second year of the Department's existence, the space allotted to it was made inadequate by rapid increases in enrollment. The old residence of the President was unsatisfactory on account of the number of rooms and the size of them. The year 1931-32 saw some welcome additions to the housing space of the Department. The old Athletic House was made vacant during the year by the completion and occupancy of the new Physical Education Building. The old Athletic House was then assigned to the Department of Music and certain alterations made in it and in the old Music Building to better accommodate the activities of the Department. The addition of ten rooms, available through the remodeling of the Athletic House, made it possible to tear out partitions in the old building and put at the service of the Department four larger rooms badly needed to accommodate the large sections now necessary in many courses. Under this arrangement, it is now possible to have all theory classes, that is, all of the regular classes of the 400 and 600 groups, in the old building and have all the applied music and instrumental classes in the Athletic House. This is a desirable arrangement, since the latter group of courses is more noisy and is better segregated. When all of the scheduled work of the Department had been accommodated in the newer building, it was found that five rooms, not considered by the architect safe for classrooms, were available for practice purposes. These rooms have been equipped with pianos and for the first time in this history of the Department, students who are without practice facilities elsewhere may be scheduled for practice on the campus. This is not only an accommodation to the student but makes it possible for the Department to insist on a certain degree of accomplishment in applied music which it could not do before, since the excuses of students for irregular practice were so valid that they could not be denied. The effect of available practice rooms upon student work is already apparent and will do much to improve standards of work and lessen student mortality in the next three years.

The Department, therefore, has now at its disposal for recitation, practice, and conference, a total of about seventeen rooms. All of this space is in buildings of the ramshackle variety where heating, lighting, and ventilation are all poor. All those in close contact with the Department marvel that the old buildings stand the tremendous amount of traffic which passes through them day after day. In spite of these difficulties, the Department continues to be enthusiastic, progressive, and of service to its students. The additional

space provided this year has been a great encouragement to instructors and students alike. If we cannot be respectable in point of housing, we can be in point of teaching and results obtained.

The Judging Pavilion.—By a recent action of the President, a large room in the old Judging Pavilion has been assigned to the instrumental organizations of the Department under the direction of Professor Weigel. It is expected that these organizations will be able to occupy the room within the next few weeks. The space in question is well adapted to a large rehearsal room and three small offices. The latter will be used for the storage of equipment and music and as headquarters for the issuing and collecting of equipment. The rehearsal room will accommodate the Concert Band, the University Orchestra, the Salon Orchestra, and other instrumental groups, in fact, all such groups except the Military Bands, which will continue to be housed in the Stadium. The improvement in rehearsal conditions effected by this additional space is more than the matter of a larger room. The old rehearsal room in the Stadium had accommodated about seventy, was damp, and had almost no ventilation. Into this space one hundred twenty performers had been crowded, a condition making excellent results an impossibility. These groups can now rehearse in a room of more adequate size. In addition to the increase in space, however, the new quarters make it possible to bring to the campus proper all organizations having women students in their membership. The dangerous practice of requiring women students to go to a dark corner of the Stadium for rehearsal three or more times in the week, can now be discontinued. The advantages derived from the change are so numerous that a recital of them would be inappropriate in this report.

Summary of Housing Facilities.—A summary of the housing conditions in the Department indicates how widely scattered music activities are on the campus and how badly they are in need of being brought together in a new building of adequate size and arrangement. The Department is now using the following space:

The Old Music Building (the old residence of the President),
entire building
Music Annex (old Athletic House), entire building
Page Hall, four rooms for offices
Judging Pavilion, rehearsal and storage space
Stadium, two rehearsal rooms

Rehearsals are also carried on regularly in the Ohio Union, Pomerene Hall, Campbell Hall and the University Chapel.

ACTIVITIES OF STUDENT MUSIC ORGANIZATIONS

The student music groups yearly become a greater responsibility to the staff and a greater avenue of service to the student body and to the University. Enrollments in these campus organizations have increased during the two-year period from two thousand to nearly three thousand for the four quarters. These students come from all colleges and all class levels. While the organizations are a matter of professional preparation and experience for a relatively few music majors, they are an extra-curricular activity for many times more and in addition serve as a wholesome interest and avocation.

Instrumental Organizations.—During the past two years the instrumental organizations have been growing in size and excellence. For a time the num-

ber of regimental bands was increased from two to three as a part of a program which had as its goal the ultimate establishment of four such bands to serve the four regiments of the Military Department and give the maximum musical outlet and interest to under-classmen. The rehearsal space available, however, was so unsatisfactory that during the year 1931-32 the number was reduced to two bands instead of three. The addition of the Judging Pavilion to the rehearsal facilities of the Department now makes it possible to again organize a third band, but the Department is reluctant to attempt this until additional instructors in instrumental music can be provided and a reasonable excellence in performance realized.

The orchestra has almost doubled in size during the past year, now numbering seventy or more performers and having full symphonic instrumentation. The band now used for athletic events represents a more select group drawn from enrollments in the Military Bands and made up almost entirely of those who have had a year or more of experience in the latter organizations. The Concert Band is a still more select group representing the best available talent on the campus. A smaller group, thirteen players, called the Salon Orchestra, has been organized by Professor Weigel to play for smaller campus affairs and has filled a long-felt want.

Vocal Organizations.—The Women's Glee Club under the direction of Maude M. Slawson and the Men's Glee Club under Herbert Wall continue to improve in excellence. The University Chorus now numbers at its maximum close to four hundred members and is a splendid avenue of musical participation for many students who have not the talent or training to be accepted for the more select groups.

DEMANDS FOR SERVICE

The campus music organizations are in increasing demand for campus functions year by year. The total number of public appearances of these organizations for the two years just past would reach in the neighborhood of three hundred, a staggering total when one considers the hours necessary for preparation, the funds required to supply music and other equipment, and the strain upon the transportation facilities of the University. Convocation exercises have become a regular responsibility of these groups, although during the past two years the groups have so increased in size, concurrently with a like increase in the size of the audience and the graduating class on such occasions, that it has been found necessary to limit participation in the Autumn and Winter Convocations to the smallest group under the supervision of the Department, namely the Salon Orchestra. For Spring Convocation all organizations unite in the entertainment of guests, although the Concert Band is the sole performing group for all ceremonies connected with Spring Convocation save the Commencement Concert. Beginning with the June Commencement, 1931, the Convocation Committee decided that the simplest solution of the week's problems would be to pay the members of the Concert Band a small sum to partially meet the cost of board and room and hold them here for the three or four days between the close of the examination period and Convocation Exercises. This has proved a very satisfactory arrangement and avoids the disastrous decimating of ranks that follows the close of the examination period and has always presented a shabby idea of University organizations to campus visitors at that time. The Military Band plays at the Commencement Concert, the Sunset Supper, Baccalaureate, and Convocation, as well as at any other special functions for which their services may be desired.

The demand for service on the part of these organizations has become so great that the Department has been obliged to adopt the rule that none of them appear off the campus except at the request of the President. Occasionally organizations make trips outside the city in the interest of the University. The Men's Glee Club was this year asked to appear on the general program of the Music Supervisors Biennial National Conference at Cleveland, being the only male chorus in the United States given this honor; the Concert Band made a week's trip into northwestern Ohio, its expenses being taken care of by the towns visited and all earnings donated to charity. Broadcasting responsibilities have assumed such proportions that they have become a burden. The University badly needs an additional instructor to devote a large part of his time to this one phase. A complete account of the activities of all these organizations would require a volume.

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Department of Practical Arts and Vocational Education

This Department is so rapidly and so closely approaching a crisis in its development that this report for the past two years acquires a peculiar significance, both in conditions described and inescapable forecast; which may be best presented, perhaps, in a series of succinct statements, as follows:

1. The two-year period now closing ends also a six-year period of reorganization and development within the department.
2. At the beginning of this six-year period, the Department's program consisted of one curriculum in one area of teacher preparation, Industrial Arts.
3. Now its program embraces five areas of teacher preparation and more than twice five curricula.
4. For the five years from 1926-1931, total enrollment grew 227 per cent, and graduate enrollment 2267 per cent.
5. During the past year 1931-32, the rapid increase in enrollment has continued over that of corresponding quarters of last year, as follows: Summer, 13 per cent; Autumn, 27 per cent; Winter, 35 per cent; Spring, 26 per cent—or for the entire year, more than 25 per cent. It should be noted that the Summer Quarter increase of 13 per cent was over an increase of 52 per cent in the preceding Summer. In other words, the total enrollment increase of the Summer Quarter of the past two years has been more than 65 per cent.
6. Major responsibility for this enlarged and growing program still rests with the same three instructors as of six years ago—strictly speaking, two regular members of the staff during the academic year, since all three are on duty the full Summer Quarter.
7. Among offerings of undergraduate grade, more than 50 per cent of the Department's program of studies is laboratory in character.
8. These laboratory offerings, dealing as they do primarily with the tools and machinery of mechanical intelligence, present a peculiar and dual instructional problem, because of (1) the physical hazard involved in the use of sharp-edged tools, power current, and high-speed equipment; and (2) the penalty in teaching load imposed for the laboratory type of instruction.
9. No traditional class instruction can approximate the strain imposed upon the teacher by laboratory practice of this character. Instruction here should be at a premium, rather than under penalty of teaching load.
10. By reason of the inherent nature of advanced student work, and partially by reason of the cosmopolitan character of the student clientele in this department, graduate instruction also takes on substantially the character of laboratory work, so far as time and individual attention are concerned.

11. One particularly serious handicap in this situation is inability to develop the graduate program. While there has been rapid growth in this area of enrollment, there is not major staff to handle additional offerings. Yet this lack merely aggravates the situation, since assistance must be provided for students with special problems. Thus, aside from scheduled teaching load, the two regular instructors this quarter are counseling a total of 54 thesis and minor problem enrollments. When supervision of practice teaching enrollments is added, this extra-class total rises to 75. Obviously this situation cannot but be obstructive of the department's graduate development.
12. While some departmental assistance has been provided during the past three years, this in itself has not been adequate—in fact, it cannot be adequate, since no amount of such support can relieve the regular staff of major responsibility for the program of studies and counseling.
13. It follows that the actual duties and responsibilities of the Department have definitely outgrown the regular instructional staff of three members. Professionally, the law of diminishing returns is operative, and unless major relief is provided, will continue increasingly to operate until gains made thus far are wiped out.
14. While budget limitations for the remainder of this biennium may make it imperative that we should "carry on" for the coming year against these odds, only augmented, minimizing our discrepancies and losses as largely as possible, yet the Department is compelled to anticipate early relief within two areas (commercial, and elementary practical arts), or to recommend abandonment of portions of its program already developed and increasingly in demand.

Despite the story of imminent crisis faced by the Department, as told in the foregoing statements, they tell also of gratifying growth and prestige in an area of "special" education, traditionally ignored or depreciated in comparison with "regular" types of schooling-areas, however, increasingly recognized and required in the public schools. Teacher demand in these areas during this period of economic depression, and at the same time continued growth of enrollment, tell their own story of modern status of practical types of education; increasingly, superior students are turning from traditional lines of preparation to these of greater demand and opportunity. Increasingly, high-type teachers and administrators already engaged in these lines of work are coming here from all parts of the country for advanced degree work.

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COMMERCIAL EDUCATION

To get a proper background for understanding in this area, it is necessary to recall that up until about three years ago, the preparation of commercial teachers was still in the hands of the private business college. Then, nominally, this highly unsatisfactory arrangement was terminated when the State Director of Education disqualified the private schools for professional preparation, and at the same time called upon the state-supported institutions to meet their proper responsibility in this basic educational field, as they were generally doing in others. There was some positive response from the State Teachers' Colleges, though none from the State University, where leadership should have been first forthcoming.

Here at the University, the situation is especially deplorable. While five curricula for commercial teacher training are provided, through cooperative arrangement with the College of Commerce, only one of them (accounting) falls among the first three in public-school demand, and there it stands third. Shorthand and typewriting, first two in teacher employment, are not pro-

vided. Moreover, professional commercial offerings are restricted to the Summer Quarter. The obstacles arising out of these conditions are of more than one kind. First, each student who would become a teacher in the "commercial" field, to qualify for certification, must proceed to a private business college for a training of twenty-four weeks in shorthand and typing, *after* having completed the full four years required here for the B.S. degree. Obviously, the effect of this is to impose a five-year preparatory program upon prospective teachers in the commercial field; whereas, if the University provided these elements of preparation, upon either college-credit or non-credit basis, preparation could be completed within the four years, standard in other areas. These facts and the attitude of the State Department towards them are stated in a recent communication:

.... It is a fact that we do not accept work from the business colleges unless the trainee has actually in his possession a four-year provisional or life high-school certificate. We found that no other plan or agreement would work with the business colleges, and hence had to make this drastic ruling.

We should be very glad indeed to see the day come when Ohio State would make arrangements to give the graduates of the College of Commerce a thorough training in the elements of bookkeeping and in shorthand and typewriting. We would then get a product for the commercial teaching field that would be greatly beyond what has been produced, and would be rid of the bothersome problem of dealing with private business colleges. . . .

Furthermore, those who take the commercial degree in the typical manner, without summer school attendance, go to their work with inferior preparation in special methods, or with none. Similarly, they do not receive the professional assistance they should have in their supervised teaching.

OFFERINGS INADEQUATE

The observation is inescapable that heretofore we have restricted enrollment in this area for years past by the simple expedient of failing to schedule offerings needed for students to meet curriculum requirements. Finally, however, demand for professional preparation in this area has become so strong that students are enrolling in such numbers that but one set of alternatives appears; viz., this institution must either provide for effective offerings in commercial curricula and courses or abandon its paper program. It is not professionally honest to continue as at present.

The case is aggravated by the increasing demand for graduate commercial facilities, for which the University is peculiarly obligated. Here is one of the major educational areas of public education, both in generally recognized importance and pupil enrollment, for which whatever leadership is forthcoming must be sought in foreign institutions—New York University, Harvard, and the State University of (agricultural) Iowa. The Ohio State University, strategically located in intensely industrial and commercial Middle West, has found neither sentiment nor finances to meet this practical demand in public education.

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Department of Principles and Practice of Education

The past biennium has been uneventful in the Department of Principles of Education, so this report can be brief. The following topics are of special importance at the present time:

PRACTICE TEACHING

The situation in this area has never been, and is not yet, satisfactory. To a very limited extent the supervision of practice teaching in the biological sciences has been materially improved by the participation of Professor David Miller, of the Department of Zoology, in this work. Unfortunately Professor Miller can take care of only ten or twelve practice teachers per quarter, and the enrollments in the natural sciences have grown at such a rate that the conditions are more acute than they were before. In elementary education the enrollments have likewise gone up to a point where they create a serious problem. There were sixty-one juniors in elementary education last year. Our supervisory personnel is again inadequate. In the past we have always had recourse to assistants to round out our supervisory staff, particularly during the Spring Quarter, but even this makeshift may not be available to us during the coming year. The reduction in the staff of assistants makes it impossible to foresee how the work of next year is to be cared for, unless the city schools should prove willing, in view of the financial situation, to let us send out practice teachers without making provision for supervision. It is hard to imagine that they would acquiesce in such an arrangement.

In order to gain further improvement, the Department has recommended that Dr. H. B. Alberty be officially designated as Director of Practice Teaching. If this recommendation is approved, it is expected that more attention will be given in the future to the cultivation of our relations with the city schools and to the integration of our campus courses with one another and with practice teaching.

ELEMENTARY EDUCATION

The experiment of conducting the elementary school in the apartment building on Frambes Avenue has been gratifyingly successful. The applications for enrollment have exceeded the capacity of the school. The parents are cordial in their endorsement of what is being done. The atmosphere of the school is excellent, and we feel now that we are really on the way towards the development of a school that will have a significant influence on elementary education in the state.

It may be added that the school, even in its present almost embryonic form, is attracting wide attention. In part this is doubtless due to Dr. Zirbes' standing in the profession, which makes an undertaking in this field sponsored by her at once a matter of immediate and general interest. This interest, however, has also been a matter of apprehension, and almost of embarrassment to the Department. We have abundant faith in our undertaking, but we also realize that business of translating theory into practice takes time and requires a high order of ability. However, the elementary school is now a part of the University School, so that it is not necessary nor perhaps appropriate, to devote further space here to this topic. I wish, however, to record my conviction that we have here an exceptional opportunity to do the kind of thing for which the College was organized. Our elementary work is growing remarkably; the elementary school is already functioning largely in our teacher training, and we look forward to coming to grips with the all-important question of aims and purposes in elementary education.

COLLEGE TEACHING

The subject of college teaching is awakening interest all over the country. We are confronted with the need of revising our conception of liberal educa-

tion. In the Department this interest is represented particularly by Dr. Hullfish. He is cooperating with Dr. Klein of the Department of School Administration, and we hope that in the near future we can offer solid and well-organized work in this field. When our University School gets under way, we expect to attack the question of college teaching from that direction also, since the problem of college teaching and of high-school teaching is largely the same. We have high hopes that our College will make important contributions to this subject in the next few years.

COURSES IN EDUCATIONAL THEORY

During the past few years various circumstances have combined to lessen our emphasis on educational theory. I view this change with considerable misgiving. Our emphasis on this subject is one of the distinctive features of our College, and there is much reason to think that this subject will become of increasing importance during the next decade. The unlimited confidence in scientific method as the sole road to progress is waning rapidly in educational circles. We seem to be moving in the wrong direction. Dr. Thayer offered some work in this field and, as you know, he has not been replaced. Professors Hullfish and Alberty are finding their time more and more invaded—Dr. Hullfish particularly by this matter of college teaching, which we cannot afford to ignore, and Dr. Alberty by the demands of practice teaching and the necessity of devoting attention to high-school problems of a more specific nature. We should plan to strengthen our work in theory in the near future.

The spirit of the staff is excellent. All members give ungrudging time and attention to their teaching and to the needs of individual students. The spirit of cooperation is all that could be asked, which will doubtless be an important asset during the lean times that seem to be ahead.

Department of Psychology

TEACHING IN ELEMENTARY COURSES

During the past few years we have been putting the elementary courses on a laboratory basis as rapidly as equipment and personnel permit. This brings out elementary instruction in line with that of other sciences.

Some innovations have been tried in classifying students for instructional purposes. We devised tests of reading and listening ability which were given to all students in Psychology 401 on the first day. The students were sectioned on the basis of these tests, and this method of selection has proved to be the most satisfactory which we have thus far used. A section of particularly high-grade students who were furthermore interested in high attainment was organized for the 402 courses the second term and they were given about 25 per cent additional work.

SERVICES RENDERED ON THE CAMPUS OUTSIDE THE ACTUAL ACADEMIC WORK

Psychological Clinic.—We maintain a consultation service for students and members of the Faculty in our Psychological Clinic. Frequent problems deal with personality and social adjustment. The procedure involves extensive interviews. Drs. Stogdill and Durea handle the bulk of this work for men and women respectively, although other members of the staff participate quite frequently. The Clinic, through Dr. Durea, renders much service to the office of the Junior Dean in interviewing students in the College of Education. This

work has been curtailed seriously during the present year because of budgetary limitations.

Academic and Vocational Guidance.—Many members of the staff consult with the students in their own courses or outside on numerous personal problems along the lines of vocational guidance or planning of academic programs. Much of this work involves psychological technique, rather than the ordinary type of guidance which could be given by any member of the Faculty.

Lectures to other Departments.—Members of our staff are frequently called upon to give lectures on psychological topics in other departments such as Physical Education and School Administration.

Educational Conference.—The Department, through Dr. Pressey, prepares and arranges the test exhibit for the Educational Conference. This exhibit is constantly kept up to date.

Statistical Consultation.—This service is rendered to persons engaged in research in many other departments of the University.

Intelligence Tests.—The Department supervises and administers the Intelligence Test for all the entering students and retests any others when it seems desirable.

RESEARCH

Practically all members of the staff are engaged in a certain amount of research work. Some of this is conducted individually, but with the heavy enrollment of graduate students in research courses and pursuing work for the advanced degrees, it develops that a greater part of our research activities are carried on in collaboration with advanced students. A few typical individual research projects will be mentioned, however. Enough of these are included to give a notion of the rather wide range of problems covered by the different areas of specialization.

1. An investigation of what is being done in Europe with reference to the gifted child.
2. Objective measurements of interests.
3. The psycho-pathology of Shakespeare.
4. Objective methods of rating credentials for applicants for departmental appointments.
5. Construction of a point-hour ratio machine.
6. Analysis of a hundred thousand intelligence and personnel records of the state-wide intelligence test of high-school seniors and sophomores.
7. The development of the reactions of the young infant to discrete stimulation.
8. The development of vocal response.
9. The production and discrimination of tempo.
10. A mathematical statement of some of the major problems of theoretical psychology.
11. Types of emotions at different ages and strata of society.
12. Intelligence and cultural status of students from adequate and inadequate homes.
13. The nature of the learning curve equation.

Manuscripts are in progress on *Computational Statistics, Psychology of Advertising, Social and Emotional Maladjustments among College Students, and History of Psychology.*

Research conducted in collaboration with advanced college students will not be presented in detail; it will suffice to say that during the year there have been ninety-two such projects under way.

PUBLICATIONS

Books published by members of the staff during the two-year period include *Legal Psychology, General Psychology, Readings in Experimental Psychology, and A Laboratory Manual for Psychology.* Other books that are in press or very nearly so involve the following topics: *Questionnaires, Codes, and Hollerith Machines; An Outline of Psychology; Growth of Theoretical Psychology; A Dictionary of Statistical Terms.*

In addition to the foregoing, members have published about eighty articles in scientific journals during the two years. This does not include a considerable number of signed book reviews. At least three members of the staff do fairly regular abstracting for psychological journals.

MISCELLANEOUS ACTIVITIES

Outside Lectures.—Members of the staff are called upon for numerous lectures to outside organizations, mostly without remuneration. At a very conservative estimate this runs to something over one hundred lectures for the biennium.

Committee Work.—It is impossible to represent statistically the load of committee work carried by the Department. Some members are serving on as many as fourteen major committees. A canvass of the more important instances of committee participation involves something over one hundred committees on which members have served during the two-year period.

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Department of School Administration

GROWTH OF THE DEPARTMENT

A recent study of the growth of the Department of School Administration during the last ten years has been made and statistics are presented herewith showing that growth.

Table I shows the number of class registrations by quarters during the last ten-year period.

Table II shows the number of M.A. and Ph.D. degrees granted during the last ten years and also a summary of the degrees granted prior to 1921-22.

Table III presents the number of resident graduate majors in School Administration for the last ten-year period.

From these data the following conclusions are worthy of consideration:

1. Beginning about 1923-24 graduate work in the Department of School Administration has developed in greatly increased quantities. The Department now annually grants between sixty and seventy master's degrees and from eight to twelve doctor's degrees.

2. The prospects during the next ten-year period are for a slight increase in these numbers. The master's degrees will perhaps increase to eighty or ninety during the next five years and the doctor's degrees to ten or fifteen.

3. The men who receive the Master of Arts degree are almost invariably working in the field as teachers, principals, and superintendents. Those receiving the doctor's degree are college professors, research specialists, and in a few cases superintendents. The distribution of 38 doctorates is as follows:

College Professor	25	Dean, Department of Education	1
Research Specialist	5	Dean, College of Liberal Arts.	1
Director of Training School...	2	Superintendent	2
High-School Teacher	1	Junior High-School Principal.	1

4. The Department is dedicated to the task of aiding in the professionalization of educational administration in Ohio and in the United States. There are a hundred thousand educational administrators in the United States and about five thousand in Ohio. Only a small fraction of these administrators are professional in their training and equipment. Admitting that these positions should be professionalized and that master's and doctor's degrees should be required in this professionalizing process, the task of the Department of School Administration is a constantly increasing one.

TABLE I
SUMMARY OF CLASS ENROLLMENTS IN SCHOOL ADMINISTRATION BY QUARTERS FOR THE TEN YEARS
1922-23-1931-32

Years	Summer Quarter		Total for Summer Quarter	Autumn Quarter	Winter Quarter	Spring Quarter	Total for Academic Year	Total for Summer Quarter and Academic Year
	First Term	Second Term						
1931-32	1356	823	2179	419	499	432	1350	3529
1930-31	1191	655	1846	387	461	419	1267	3113
1929-30	1027	593	1620	354	440	367	1161	2781
1928-29	986	562	1548	375	465	441	1281	2829
1927-28	820	430	1250	409	433	355	1197	2447
1926-27	833	468	1301		924		924	2225
1925-26	594	384	978		939		939	1917
1924-25	626	268	894		848		848	1742
1923-24	475	282	757		724		724	1481
1922-23	473	202	675		568		568	1243

TABLE II
SHOWING THE NUMBER OF M.A. AND PH.D. DEGREES GRANTED BY THE DEPARTMENT OF SCHOOL ADMINISTRATION FOR THE TEN-YEAR PERIOD 1921-22-1931-32

Years	Number of M.A. Degrees			Number of Ph.D. Degrees
	Summer Quarter	Academic Year	Total	
1931-32	49	9	58*	10
1930-31	45	21	66	6
1929-30	34	18	52	4
1928-29	37	15	52	7
1927-28	33	12	45	0
1926-27	22	13	35	6
1925-26	18	6	24	2
1924-25	12	10	22	2
1923-24	7	7	14	1
1922-23	13		13	0
1921-22	11		11	0

* Not including the Spring Quarter 1932.

No Ph.D. degrees were granted before 1923-24. Only 18 M.A. degrees were granted prior to 1921. The distribution of these was as follows:

1920-21	3	1916-17	7
1919-20	1*	1915-16	0
1918-19	6	1914-15	0
1917-18	0	1913-14	1

TABLE III

RESIDENT GRADUATE MAJORS IN SCHOOL ADMINISTRATION FOR THE TEN-YEAR PERIOD 1922-23 TO 1931-32

Years	Summer Quarter	Academic Year (12 months)
1930-31	433	483
1929-30	362	416
1928-29	329	379
1927-28	276	335
1926-27	227	264
1925-26	225	253
1924-25	168	195
1923-24	141	162
1922-23	112	129

* * *

GEORGE F. ARPS, *Dean*

COLLEGE OF ENGINEERING

The past two years have been satisfactory ones, the College continuing its forward movement in better teaching, betterment of physical equipment in certain departments—although still lacking in others—and on the whole in a healthy increase in the size of the student body, although there was a decided drop in enrollment at the beginning of the year just past. The total registration for this biennium was nearly 8 per cent greater than for the previous biennium. There was, however, a drop of 7 per cent between 1930-31 and 1931-32, the registration for 1931-32 going even below that of 1929-30. This decrease was due to the drop over one hundred in last fall's freshman class, which decrease was partly occasioned by the more rigid enforcement of entrance requirements, compelling more freshmen to enter the College of Arts and there make up their requirements. The number receiving degrees in the biennium was only 1 per cent greater than in the previous two years. According to government reports for 1930-31, the numerical position of the College is eighth in the list of the one hundred and forty-five engineering schools of the United States.

The report of two years ago named the departments of Industrial, Mechanical, and Mine Engineering as having the greatest student increase. This year the highest increases, upon a percentage basis, fall to the departments of Chemical, Mechanical, and Metallurgical Engineering. During the past two years the enrollment in Mechanical Engineering has been in excess of that in Electrical Engineering, a condition which has not existed before in over forty years. This change is undoubtedly due to the popularity of courses in aeronautical engineering.

FACULTY ACTIVE IN S. P. E. E.

As usual, the faculty of the College was well represented during the past two years in the activities of the Society for the Promotion of Engineering Education. The thirty-ninth and fortieth meetings were held at Purdue University and Oregon State Agricultural College, in Lafayette, Indiana, and Corvallis, Oregon, respectively. The Purdue meeting was the largest ever held, and our College had its usual large delegation, ranking next to Illinois, which is only three hours distant by automobile. At the Corvallis meeting Professor T. E. French was our Institutional Delegate. It was not possible for others to go on account of the heavy expense. Professor French was scheduled for the Olympic Games in Los Angeles, which made possible his attendance at the Society meeting.

As was stated in the report of two years ago, one of the most constructive developments resulting from the recent world-wide investigation of engineering education, is the summer school for engineering teachers. To date there have been eight such sessions, held each year at different institutions throughout the country. This year The Ohio State University was favored by being chosen as the most satisfactory place for holding the School in English for Engineers. This selection was based upon two important factors, namely the central location of the institution, and Miss Sada Harbarger's prominence in this division of the Society, she having been its chairman for many years. Since the inauguration of these summer schools there have always been two schools every season, dealing with two subjects. The other one for this year

was on the teaching of Economics and was held at Stevens Institute of Technology. This activity of the Society is of such great value that every encouragement should be given members of our staff to attend. I have been advised that at one of these meetings the majority of those in attendance had their expenses paid by their respective institutions. Surely attendance at such a school, primarily for the betterment of teaching, is fully as valuable as the presentation of papers at scientific or engineering society meetings; therefore the University is justified in bearing a part of the expense incurred by those who attend, that is, if consistent with a University policy relative to meetings of a scientific or engineering character.

In the report of two years ago reference was made to the appointment of a Junior Dean the year before as an outstanding event. I wish to repeat what was said at that time, that it was most gratifying to see the enthusiasm with which Junior Dean Turnbull tackled the freshman and sophomore problems. His enthusiasm during these two years has gone on unabated, and our College is to be congratulated that we have one in that position whose counsel with our students is most inspiring and a source of new life to many a young man who was finding his work extremely difficult and discouraging. No more can it truthfully be said that the small engineering schools are preferable on account of greater personal contact. Judging by my experience as a student in a small university—as compared with those of today—such a statement is far from true. Junior Dean Turnbull's excellent report is commented upon below under its proper heading.

ACTIVITIES OF THE UNDERGRADUATES

I wish to repeat what I have said before about those student activity groups which are the most effective in bringing about unity and solidarity in the student body, namely, The Ohio State Engineer's staff and the Student Engineers Council. Very few realize the important parts played by these two groups of upperclassmen. The publishing of the *Engineer* is a student responsibility which goes far beyond the campus, for it ties our College in with twenty-two other leading engineering schools. There is, however, one drawback, which seems to prevail in other engineering schools as well as our own, and that is that many students, especially upperclassmen, do not give this activity proper support through subscriptions to the *Engineer*, a condition which should not exist. The freshman class always gives the greatest support. At some institutions the problem is solved by including the price of a subscription on the engineering student's fee card.

The Student Engineers' Council, composed of two representatives, a junior and a senior, from each student engineering organization, was most active during the past two years. This group holds its meetings regularly twice a month, and the Dean very seldom lets anything interfere with his presence at such meetings. Two years ago the Council was very much concerned about a satisfactory place for holding the annual "Roundup," because the large room in the Experiment Station, where previous affairs had been held, was not available. One of the electrical laboratory divisions was made available through changes in equipment location, but the space was not very satisfactory. This past year the Council returned to those quarters where it held its first "Roundup," the Armory, and was very happy in the change, made possible by the completion of the new Physical Education Building.

Every other year the Council plans and supervises the program of Engi-

neers' Day, a biennial affair usually held on Traditions Day. "Open house" in all departments is the principal part of the program. The attendance this year was much beyond that expected and some difficulty was experienced in getting people to vacate at 10 P. M. The parade of floats around the oval, led by the University Band, was another feature of this day. This year's Engineers' Day was one of the most successful ever held. On the whole the day was a very eventful one, made possible by the most hearty cooperation of all taking part. Those organizations and departments which took part are to be congratulated upon their exhibits. The winners of the silver cups for the best departmental exhibit and for the best float, were the Department of Industrial Engineering and the honorary electrical fraternity Eta Kappa Nu.

While larger appropriations for equipment will always be needed, it is a fact that the departments of Electrical, Industrial, and Mechanical Engineering will now compare favorably with similar departments in other engineering schools of the United States. The Department of Chemical Engineering added some valuable equipment during the past biennium, a step forward but not enough. All other departments are much behind the procession of those engineering schools of the same size and grade as our College of Engineering.

* * *

Architecture and Architectural Engineering

With the opening of the academic year 1930-31, the new five-year curricula in Architecture and Architectural Engineering went into effect and, as had been anticipated, this move, together with the acute depression in the whole building industry, has resulted in a marked decrease in the student enrollment. This situation has relieved the greatly overcrowded condition of the drafting rooms and, through the reduction in class size, has made for greater efficiency in the teaching. There is most certainly a better and more serious body of students than those enrolled under the old four-year curricula. Taken as a whole, then, the reduction in enrollment has been a material benefit to the Department, particularly as we have been without the services of one instructor dropped at the beginning of the period here reported. During this period the teaching load has been increased by the addition of five new courses.

FACILITIES ARE INADEQUATE

Though there has been progress made in the better educational offerings of the Department and in better teaching, there has been a distinct loss in the material facilities to conduct the work. The chairman has reported annually on the inadequacy of the library material with which our students must work, and during the past two years practically no improvement has been made in this important matter because of the decreased appropriation for books. No progress has been made in the development of a materials laboratory, and little or no progress has been made in the Department's collections of photographs, slides, and other such material essential to better instruction. In spite of these discouraging handicaps, and of reduced salaries at a time when increases were rightly deserved by the younger members of the teaching staff, the spirit of all teachers has continued on a high level. Weekly departmental meetings have been held for the discussion of the educational problems of the Department. Educational contacts have been maintained with the American Institute of Architects, the Association of Collegiate Schools of

Architecture, the Beaux-Arts Institute of Design, and the Foundation for Architecture and Landscape Architecture. The Department has served the State Board of Examiners of Architects in preparing the eleigislative bill providing for the registration of architects in Ohio, and in the preparation of the examinations to be conducted by the Board. These examinations will be held at the University during the summer.

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WEOB Broadcasting Station

The past year has been a most unusual one in the development and activity of Broadcasting Station WEOB. Marking the tenth year of active work, it has been filled with many critical situations, which, with generous help of the Administration, have been successfully met.

An order of the Federal Radio Commission made necessary a definite time division agreement with WKBN, Youngstown, sharing time with WEOB. Since this agreement could not be made, the Commission designated the case for hearing late in November. Following the hearing, at which both stations presented arguments and requests for additional time, the Examiner's report was decidedly unfavorable and limited the broadcasting hours to daylight time only. The Attorney General of Ohio, Gilbert Bettman, responded vigorously and in the end won a most favorable decision enabling WEOB to continue on a highly satisfactory schedule of 40 hours per week with 17 night hours. This fine victory has stimulated more interest and support than any other event in the station's history, the official recognition of the Federal Radio Commission lending great encouragement and public interest to educational broadcasting in Ohio. The fine support of many organizations and individuals in the face of an unfavorable decision has demonstrated clearly that the service rendered by the station is respected.

It was necessary to install a new and modern radio transmitter in the course of the year in order that the technical transmission requirements of the Federal Radio Commission could be met in a satisfactory manner. These requirements specified closer adherence to the transmitted frequency and an increased proportion of modulation, both of which will improve general conditions and enable the station to be heard with less interference and over a somewhat larger area. WEOB is now giving what is defined as "good service" to a distance of seventy miles, including nearly thirteen thousand square miles and a population of one and a half million. A "fair service" area extends to about ninety-five miles and may be relied upon as a satisfactory signal except in the business or industrial sections of cities and towns.

During the year 967 programs were broadcast, totaling 1,649 hours on the air. Almost every conceivable type of program was included, many of them programs of outstanding merit and interest. The approximate division of programs was as follows:

	<i>Percentage</i>
Interesting informative talks	13
Practical information	24
Teaching, organized lessons	11
Music	25
Drama	12
Publicity about University	4
Government	1
Sports	4
Miscellaneous	6

Fifty-five departments of instruction have taken part in the year's broadcasting. A total of 1,558 talks were presented with the following general divisions:

Off-campus speakers on night programs	214
Off-campus speakers on day programs	182
College of Agriculture talks	377
Other University departments	585

The cooperation of the faculty has been most commendable, enabling the presentation of information most desired by the public. The broadcasting committees of the Colleges of Agriculture, Medicine, and Engineering have been active in directing a coordinated college program.

* * *

Department of Ceramic Engineering

The past two years have been entirely satisfactory so far as educational considerations are concerned. The reorganization of our curriculum during 1928-29-30 has enabled us to produce graduates with much better equipment than heretofore, and the reputation of this Department in the industries is greatly advanced. In spite of almost complete stagnation of all the ceramic industry, the manufacturers display a keen interest in the work and are hiring a few men.

The glass and enameled metal industries, which are being served through courses recently provided, are particularly enthusiastic.

The registration of graduate students has greatly increased, and since the demand for men with graduate degrees is definitely increasing, this group of students is demanding an abnormal amount of educational service and equipment which must be provided.

The researches now being conducted by both graduate and undergraduate students are of a much higher grade than ever before, and are being followed with keen interest by the leading ceramic scientists, both in this country and abroad.

A survey conducted since January 1, 1932, indicates:

1. That the ceramic engineering graduate has not suffered as much as other engineering graduates as a result of the depression.
2. That any increase in demand in future will be chiefly for men with special training in research and development, as provided by postgraduate courses.
3. That the mediocre student will find little opportunity in ceramic industry in the future.

Based on these reports, the requirements for credit in Ceramic Engineering courses are being materially raised and all courses are being critically studied and revised to best meet the demands of both student and employer.

Department of Chemical Engineering

The number of students receiving degrees, both advanced and undergraduate, from the Chemical Engineering Department in this two-year period was one of the largest in recent years. For the year 1930-31 eleven students were granted the Ph.D. degree, eleven the M.Sc. degree, and twenty received the degree of Bachelor of Chemical Engineering. In addition, one Professional Degree was awarded. For the academic year of 1931-32, six candidates received the Ph.D. degree, eleven the M.Sc. degree, and twenty-two the Bachelor

of Chemical Engineering Degree. About 75 per cent of the undergraduates were of "A" or "B" ranking; about 25 per cent of the total enrollment were "A" students.

As a result of the volume of research under way in the Department fourteen publications were issued and published in leading technical and scientific journals, and three papers have been accepted by editors for publication.

Considerable correspondence has been handled in the Department regarding registration for advanced work. Inquiries have been received from all parts of the United States and some foreign countries. Many students in our graduate courses are men with many years industrial and teaching experience in various fields.

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Department of Civil Engineering

During the past two years the Department has carried on with a steady attendance of students in spite of the depression. The effect of hard times has, however, appeared in one way during the school year just ended. For the first time in thirty years we did not have more calls for help than we had men graduating. This situation applied also to undergraduates during the past two years, in that we were not able to supply them all with practical work with some pay, as we had previously done, a summer surveying camp formerly furnishing work for those students not otherwise engaged.

FACULTY ACTIVE IN RESEARCH

The members of the instructional force have carried on research in addition to teaching, eight of the twelve being engaged on Experiment Station projects. Since Professor Prior's bulletin, mentioned in the last biennial report, Professor J. R. Shank has published two bulletins in collaboration with Mr. H. D. Foster, and Professor G. E. Large has published one in collaboration with Professor C. T. Morris. The chairman has just completed the manuscript for another bulletin, advance data from which have been used extensively by three State Departments, and it is desired for use by the State Water Conservation Board in its coming report to the Governor.

Each instructor in the Department marks the papers of his own students and thus keeps closely in touch with them. Examination papers are returned after marking and are reviewed in class to insure corrections. Besides this, frequent department conferences are held in the evening, when several hours are available to discuss student situations, educational problems, and matters of department welfare. At only three meetings in the last ten were any of the twelve members of the staff absent.

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Department of Electrical Engineering

The general aims which have directed the Department of Electrical Engineering during the past two years might be stated briefly by saying that it has been our endeavor to give the students in Electrical Engineering not merely a training, but also an education. In pursuing these aims we have studied carefully the reports of the Society for the Promotion of Engineering Education and have applied the results of their investigations wherever it seemed to be safely possible.

In carrying out our general aims we have moved in the direction of "liberalizing" our curriculum. This process as we interpret it consists in putting over to the graduate years any intensive specializing within the field of Electrical Engineering and moving into the undergraduate years courses and subjects of a more fundamental nature in the fields of science and mathematics. Along with this emphasis on fundamentals has come a distinct progress in including non-engineering courses in the Electrical Engineering curriculum. As examples of this there are two courses in Economics which were already required, to which have lately been added two courses in American History. In further carrying out our aims in connection with the curriculum, there has been added a complete block of elective hours to the curriculum of Electrical Engineering. The Department does not believe, however, that electives should be subjected to the abuses of the "free" elective system. Along with our electives go two other innovations designed to make the best out of the elective time. These innovations are the advisory system and the survey courses in the sophomore and junior years.

Every student in Electrical Engineering beginning in the sophomore year has an adviser on the faculty of the Department. It is the business of this adviser to sit down with the student three times a year and talk over his problems and his progress through the University. The adviser must approve the schedule of the student which includes his electives. A recent extension of the advisory function has been made in "long-time planning" of each student's program of study, extending through to graduation. This has been found necessary in order to keep the student from leading a hand-to-mouth existence from quarter to quarter in the matter of scheduling. Each student is required to sit down and plan the architecture of his whole college course; even during the short time that this system has been in use it has shown numerous cases where future difficulties have been avoided and a smooth working program assured. In addition to this the psychological value to the student of long-time planning has a very salutary effect.

With the elective system has been coupled the survey courses in Electrical Engineering, one for the sophomores and one for the juniors, in addition to the one already existing for the seniors. In the sophomore and junior courses, the ideals of the freshman survey courses are extended and in addition an attempt is made to bring to the attention of the students matters of vital concern to them as a group. Many outside lecturers are called to stimulate interest in various fields of thought beside Electrical Engineering. As a result of one year's experience with these courses, we find our students coming to us wishing to elect courses in psychology, philosophy, poetry, astronomy, English, sociology, and many others. This is very encouraging.

WELDING CONFERENCE ARRANGED

Realizing that welding is fast becoming an important tool, both in production and maintenance, it is felt that the student should receive some practice in both gas and electric welding. Through the generosity of the Linde Air Products Company, sufficient equipment for fourteen gas-welding stations was installed. This material, consisting of oxygen and acetylene manifolds, regulators, hose, blowpipes, and tips, is of the latest design and makes an admirable unit for the teaching of gas welding. The electric welding is taught on four machines—three Electric Company D.C. machines, and one Omaha A.C. welder. One of the Lincoln Electric Company's machines was consigned

to the Department, as was also the Omaha welder. The welding work has been given in connection with the courses in Industrial Engineering 418 and 408.

The Department held its first welding conference and exhibit February 25-26, 1932. Approximately a thousand people from Ohio and neighboring states attended this conference. Twenty-five demonstrated their products. Papers on welding were read by prominent men connected with the industry. The meeting was quite successful.

* * *

There are no drastic changes contemplated at present. It is hoped that since welding is being so widely used a course devoted entirely to this important industry will be added to the curriculum when the proper time arrives. A plan is being formulated whereby three courses, Industrial Engineering 415 (Elementary Forge Practice), Industrial Engineering 417 (Advanced Forge Practice and Heat Treating), and Industrial Engineering 418 (Forge, Gas, and Electric Welding) will be given under two headings instead of three.

Due to the success of the first welding conference, plans are being made to repeat this feature annually. A foundryman's convention and also a steel-treating conference are being planned for the year 1932-33.

In the lecture courses the enrollment for the three quarters, Autumn, Winter, Spring, has averaged five graduate students per quarter, twenty-six seniors, thirty-nine juniors, and twenty-two sophomores. In elective courses given in the Winter and Spring Quarters, the average was forty-five students per quarter.

One point we would like to direct attention to is the fact that the senior class has instituted a one-hour period each week devoted to the consideration of current topics which are of social and technical interest. These periods are handled and the talks given by the students themselves, and they are productive of much good.

* * *

Department of Mechanical Engineering

The work in Aeronautical Engineering under the guidance of Assistant Professor A. J. Fairbanks has been expanded to some extent. Several new courses, one in Advanced Aerodynamics, one in Airplane Design, one in Aeronautical Laboratory work, and a graduate course in Advanced Aeronautics have been added to those already offered. The wind tunnel, which is of the Göttingen type with a three-foot jet and a maximum air speed of 104 miles per hour has been completed, calibrated, and used in instructional and research work. A biplane and a collection of instruments and other aeronautical equipment have been obtained from the United States Army Air Corps, for use as illustrative material in instructional work. The registration in the aeronautical courses has been lighter than expected, but they have been offered too short a time to give a reliable indication as to what the demand for them will ultimately be. The experience up to the present time seems to indicate the wisdom of the decision previously reached not to establish a curriculum leading to a degree in Aeronautical Engineering, but to limit the work in that field to a group of elective courses available for senior engineering students.

The interest and registration in the work of automotive engineering has continued in a satisfactory manner. Some research work has been done with the new chassis testing dynamometer, and also in other directions. At the present time an investigation is being made in cooperation with the State Highway Department concerning the coefficient of friction between automobile tires and different types of road surfaces, both wet and dry. It seems probable that significant results, which will have a direct bearing on the safety of the operation of automobiles, may be obtained. A clearly indicated demand caused a new course in Diesel Engines to be established, which is being taught by Associate Professor K. W. Stinson.

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At the present time a thorough and critical study of the Mechanical Engineering curriculum is in progress. This study will probably result in certain changes, which will tend to keep us abreast of the times, but these changes will have to receive attention in next year's report.

Department of Mechanics

The enrollment in student hours per week for the last four years is given below. This is given in terms of credit hours and actual hours. Mechanics 502 and 602 have four recitations and one two-hour laboratory period each week, making actual hours six per student and the credit hours five:

	<i>Autumn</i>		<i>Winter</i>		<i>Spring</i>		<i>Year</i>	
	<i>Credit</i>	<i>Actual</i>	<i>Credit</i>	<i>Actual</i>	<i>Credit</i>	<i>Actual</i>	<i>Credit</i>	<i>Actual</i>
1928-29	1,474	1,528	1,472	1,668	1,283	1,326	4,230	4,572
1929-30	1,290	1,332	1,370	1,532	1,327	1,383	3,987	4,247
1930-31	1,498	1,569	1,487	1,662	1,647	1,715	4,632	4,946
1931-32	1,658	1,749	1,524	1,682	1,659	1,741	4,841	5,172

The enrollment in the graduate courses, Mechanics 801, 802, and 803, has averaged higher than usual this year. It is desirable to offer graduate courses in Strength of Materials.

The only increase in the undergraduate courses in the Department since the University went on the quarter plan has been made for students in Architecture.

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The present staff is sufficient to carry the undergraduate work properly and to do a little graduate work. The aim of the Department has always been to make the undergraduate work the predominant feature. Little more can be done without additional expansion and expense.

Department of Mine Engineering

There have been no changes on the teaching staff of the Department during the last two years. Professor O'Rourke has developed into a high-class man in his specialty of petroleum and gas production and transportation. This was recognized by his promotion to Associate Professor, effective in 1932. Professor Nold continues in his field of rock mining and especially in the mining of stratified deposits with emphasis on coal and clay. It is believed that the present personnel gives the Department a well-balanced teaching staff for a mining school in Ohio.

* * *

The most critical condition facing this department, and probably most of the departments of the University, is the lack of funds with which to purchase books for the Library. The library is the backbone of a university. Technical literature is not cheap, and many of the most useful volumes are published in limited editions and sold on subscription only. To function as we should, we must buy technical books when they are published. The following case illustrates the condition we are facing:

In the fall of 1931 the Third International Coal Conference met at Pittsburgh. This was attended by outstanding scientists and engineers interested in coal, from all over the world. The papers presented the best thought of the world on this subject. The transactions were sold on subscription for \$15. We had no money to buy them. We need them. We shall eventually have to buy these books wherever we can get them and probably at a much increased price.

VOCATIONAL NIGHT SCHOOLS

During the past two years, in cooperation with E. L. Heusch of the State Board for Vocational Education, the Miners' Vocational Night Schools have been continued in ten Ohio mining centers. For this work two full-time instructors are employed. These men, R. S. Wheatley and A. W. Seabright, teach two hours per night for five nights per week, each night at a different place. These men are paid their salaries by the State Board.

This year the attendance at these schools has been reduced somewhat due to labor troubles and strikes. Conditions have recently been so bad in some centers that men have been afraid to appear on the streets and highways to go to classes, and in one or two instances the instructor had to pass through the miners' picket lines to get to the meeting place. In spite of these handicaps we have been able to maintain an average attendance of about 190 men per week. Prospects now appear good for an increased attendance next year.

At the end of each year, upon the satisfactory completion of certain conditions, namely, attendance and the passing of a series of examinations, each student is given a certificate signed by the superintendent of the local school, E. L. Heusch, State Supervisor, and H. E. Nold, Professor of Mine Engineering, The Ohio State University.

These schools, during the past two years, have been located at St. Clairsville, Martins Ferry, Neffs, Powhatan, Adena, Shadyside, Nelsonville, Glouster, Murray City, Byesville, Crooksville, Poston.

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Department of Mineralogy

For the biennium 1930-32 the Department of Mineralogy has to report a continued increase in enrollment in both the elementary courses and in the advanced courses. The effect of this has been to overcrowd our laboratories and to make additional laboratory sections necessary. This has been necessitated partly by lack of equipment required to handle larger sections in advanced mineralogy courses, and partly by the cramped space that is available for our laboratory sections in elementary crystallography and mineralogy. An arrangement has been approved by which the Department of Mine Engineering releases their Ventilation Laboratory (Room 2, Lord Hall) to be used by the Department of Mineralogy for laboratory in Mineralogy 401 and 402. Laboratory space in mineralogy has been entirely inadequate, and as a result all our

laboratories are used each quarter and simultaneously for different courses which produces some degree of confusion.

Much of the research work done in the Department is concerned with thermochemical, microscopic, and X-ray investigations of systems involving silicate and refractory minerals, including metallurgical slags and refractories. These investigations are fundamental in character and are directed toward the identification of minerals present in such systems and their transformation at higher temperatures.

Bulletin 61 of the Engineering Experiment Station represents a joint report on research work done in departments of Civil Engineering and Mineralogy. The work in Mineralogy was done by Mr. Wilder Foster, fellow, under direction of Professor McCaughey, and is concerned with effect of Calcium Chloride on hydration of the minerals present in Portland Cement. This work is very timely, in that Calcium Chloride is used extensively with Portland Cement in Highway Engineering, and this report presents fundamental information as to the effect of Calcium Chloride on the hydraulic properties of these minerals. This work was sponsored by Calcium Chloride Association.

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Department of Photography

Photography, in the interest it evokes from the graduate and undergraduate students who enroll in Courses 611 and 750, seems to merit its description, "the hand-maid of the sciences," for the students are enthusiastic in the results delineated and in the enjoyment of the process itself, which of course reacts on the instructional staff.

Course 611 is handled in about the same manner as a course in free hand drawing would be, where the result, the drawing, is the main consideration; this, coupled with the understanding of the optical and chemical considerations involved, is the secret of the interest and enthusiasm of the students.

Course 750 appeals particularly to graduate and advanced students who already have their problems laid out for them, and our job is to give them an adequate understanding of the technique necessary for the proper permanent recording of their findings.

In addition to our class work, which is now being handled satisfactorily from the departmental standpoint both as to equipment quarters and personnel, we also conduct a photographic service for the University which, from reports, is, in the main, on a satisfactory basis, but in one or two items could be improved.

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Department of Metallurgy

The classroom work of the Department has been very satisfactory. Our classes have been as large (and, in some respects, larger) as we care to handle, and the attitude of the students has been quite satisfactory. Nineteen or twenty students received the Bachelor's degree and six or seven the Master's. At present, six other men are working for their Master's degree.

It is in our senior and graduate work where we feel rather seriously handicapped. We have no laboratories where the graduate students can work

by themselves with equipment which will not be disturbed, after being set up, by the undergraduate classes. We have found it necessary to discourage four or five men from other schools who wished to do graduate work with us because we had no room and because our equipment was inadequate for their work. Our graduate class has reached the limit, if it has not gone beyond the limit, of our capacity to take care of them, and it is very urgently desired that more room and equipment may be secured by the Department for the encouragement of this highly desirable class of students. In the meantime we must, of course, not allow anything to impede our efforts to do the very best work with our undergraduate students. We very much need new lockers for the sophomore classes as our present ones are disgraceful in appearance, and we need some more modern equipment in electro-metallurgical testing equipment.

The Department Library is commencing to embarrass us because of its lack of the books in the field of metallurgy that have been published in the last two years. This is handicapping our senior and graduate work.

Because of the hard times the Department Faculty is giving its services free so as to take care, during this summer, of six graduate students.

In the past year an average of one or more articles per month from the pens of the Department Faculty have appeared in various publications.

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Engineering Experiment Station

During the biennium the Station's facilities have been improved. Noteworthy items of equipment include the gas-fired experimental kilns at Roseville, the smoke-density measuring device and weighing tanks at the University power plant, the air-separation apparatus, bins for removal of test refuse, the foundry research laboratory with molding machine and electric arc furnace, apparatus for tests of plasticity and consistency of concrete, and original devices for study of visual performance.

COOPERATIVE RESEARCHES

The proper basis for cooperative research has been the subject of much discussion at meetings of the Staff and of the Advisory Council. The Ohio Manufacturers' Association has taken an interest in these discussions. It is hoped that an agreement form may be worked out which will encourage use of the University's facilities by industry and with advantage also to the School and its Staff.

Cooperation on researches in addition to those noted in the lists of new projects and new bulletins has included the study of boiler feed water, Professor C. W. Foulk, Department of Chemistry, investigator, and the American Society of Mechanical Engineers as cooperators; the flow of fluids, Professors Beitler and Bucher, Department of Mechanical Engineering, investigators, Mr. T. C. Barnes, research engineer, and the Bailey Meter Company, and a joint committee of the American Gas Association and American Society of Mechanical Engineers, cooperators; development of enamels, Professor R. M. King, Department of Ceramic Engineering, investigator, Republic Steel Corporation, cooperator; highway subsoil studies, Professor F. H. Eno, investigator, and Ohio Department of Highways, cooperator (U. S. Bureau of Public Roads also until July, 1931); study of concrete arches, Professor C. T. Morris, investigator, and U. S. Bureau of Public Roads, cooperator. From January,

1931, until March, 1932, the Calcium Chloride Publicity Committee cooperated on a study of cements under the direction of Professor R. C. Sloane, Department of Civil Engineering, and Professor W. J. McCaughey, Department of Mineralogy, Wilder D. Foster, research engineer on this project. The cooperation of the Structural Clay Tile Association has been discontinued, and Mr. H. D. Foster left the Station in the spring of 1932, after nearly four years' service as research engineer.

The patent rights to the invention of light-weight clay building material, developed under the direction of Professor G. A. Bole, have been disposed of to the cooperator, the Structural Clay Tile Association. Two companies are now manufacturing this product commercially, and others are contemplating its manufacture.

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E. A. HITCHCOCK, *Dean*

COLLEGE OF LAW

ENROLLMENT

The last two school years have seen a slight falling off in enrollment. The distribution for the past three years has been as follows:

	1929-30	1930-31	1931-32
Autumn Quarter	307	288	276
Winter Quarter	296	275	260
Spring Quarter	258	264	253

The policy of raising standards as much as is consistent with a reasonable regard for the individual's right to pursue the study of law in a tax-supported institution has been adhered to. An attempt at a statement of the difficulty of determining how rapidly and how high standards should be raised in such an institution was attempted in this report two years ago, where it was suggested that too great a heightening of scholastic standards would have the effect of driving many students, who will ultimately be able to obtain admission to the practice of law, into inferior law schools for their education. For the present, it seems wiser not to go too fast in this matter, hoping that the requirements for admission to the practice may be stiffened so that this unfortunate consequence will not follow when our standards are further raised. Such falling off in enrollment as has occurred is believed to be attributable to the economic depression which has now entered a third year.

FACULTY AND CURRICULUM CHANGES

During the school year 1930-31, Assistant Professor William H. Rose was on leave of absence for graduate work at the Yale Law School, where he did special work in the fields of the Conflict of Laws and in the Administration of Debtors' Estates. His courses were taught, for the most part, by Mr. Arthur T. Martin, a member of the class of 1929 in our own school, who had spent the previous year in graduate work chiefly in the field of Real Property at the Columbia University Law School. During the same year, Assistant Professor Norman D. Lattin was on leave of absence for graduate work at the Harvard Law School, where he did special work in Corporation Law and Finance and Criminal Law and Criminology. His courses were taught, for the most part, by Mr. Thomas C. Billig, formerly a member of the law faculties of Washington and Lee and Cornell Universities. Assistant Professor Robert M. Hunter was granted a leave of absence for the year 1931-32 to pursue graduate study in the Yale Law School, where he has worked chiefly in the field of Procedure. Assistant Professor Arthur T. Martin was retained a second year to fill in the gap caused by his absence. At the beginning of the school year 1931-32, Professor John E. Hallen came to our faculty on a two-year agreement, having taught nine years theretofore at the University of Kansas and the University of Texas. At the end of his second year, it was the consensus of opinion that he had greatly strengthened our faculty, and he has been now appointed as a permanent member of our staff. At the end of the school year 1931-32, the school sustained the first serious loss in personnel, which has occurred in recent years, in the resignation of Professor

Lewis M. Simes to accept an appointment at a considerably higher salary at the University of Michigan Law School. It may be doubted whether the school has ever sustained a more serious loss than has resulted from Professor Simes' leaving after ten years of service, during which time he has achieved national recognition as a teacher and scholar in the field of Real Property. Assistant Professor Arthur T. Martin, who had taught Real Property for the most part during his two years of service, had impressed our faculty as a man of exceptional promise. He had succeeded notably in the classroom from the beginning. Before his second year of service had ended, it was the consensus of opinion that we should add him to our permanent staff at the first opportunity. When Professor Simes resigned, it was a fortunate circumstance that we were able to obtain Mr. Martin's release at the University of Montana Law School where he had been engaged for the year 1932-33. He now assumes the work of Professor Simes in Real Property with the rank of Assistant Professor.

During the past year, a seminar course in Corporation Finance has been added to give outstanding senior students opportunity to do individual work upon problems involving both the economic and the legal aspects of special problems in this field. A course in the Administration of Debtors' Estates has also been added. This course includes the matter which is ordinarily dealt with in Bankruptcy and adds to it Composition Agreements and Receiverships. The increased interest in, and practical importance of, foreign relations has led to the offering next year of a course in International Law.

FACULTY ASSISTS IN RESEARCH

The amount of research and writing which has been done by the faculty during the past two years is a matter of considerable gratification. Professor Silas A. Harris has continued his cooperation with the Judicial Council of Ohio, The Institute of Law of Johns Hopkins University, and the Ohio State Bar Association. These organizations have sponsored and supported a survey of the administration of justice in Ohio and, as a part of this undertaking, Professor Harris has acted as chairman of a committee which has directed the gathering of statistics concerning Appellate Practice. The information collected had been assembled and studied by Professor Harris with the result that a bill has been drawn by him to be introduced in the next legislature designed to simplify, expedite and eliminate the waste at present involved in both the organization of our appellate courts and the practice therein. A gratifying number of articles, casebooks and text books have been written by the other members of the faculty in the past two years.

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H. W. ARANT, *Dean.*

COLLEGE OF MEDICINE

TEACHING

Except as indicated in the Department of Public Health, the instructional courses have been carried out as offered. At the request of the President, careful scrutiny of the offerings has been made to see if any curtailment could be made, but the curriculum of this college is so arranged and offerings required by the Association of American Medical Colleges so standardized that there has been found little opportunity of reduction.

The amount of clinical teaching material in the Starling-Loving Hospital, St. Francis Hospital, the Children's Hospital, and the State Street Dispensary has been greater than formerly, but requires careful management to provide sufficiently for the growing needs of the college. There is a great need for increase which can be met only by enlarging the facilities for clinical patients, chiefly in Starling-Loving Hospital and the State Street Dispensary.

RESEARCH

The reports from the various departments show a very gratifying amount of research work accomplished. As expected, the establishment of the Department of Medical and Surgical Research has given a marked impetus to the interest of such work. There has not only arisen a friendly rivalry, but the hearty cooperation of this department and the offering of assistance and facilities have enabled members of the clinical departments to work out problems which they were unable formerly to do.

The members of this Research Department have published some very noteworthy investigations, and the feeling is very general that the establishment of this department by the Board of Trustees was an extremely happy action.

The accompanying detailed report of the Director, Dr. Charles Doan, while listing the remarkable number of publications, does not by that means really indicate anywhere near the sum total of beneficial results of the installation of this department. It is gratifying to note in the Director's report his satisfaction with the opportunities and facilities provided for his department and his contentment with the cooperation of the Administration.

ADMINISTRATION

The Dean would report that he has had very hearty and unanimous support from all the heads of departments and members of the instructional staff. The morale has been excellent in spite of the appreciation of very needed additions in teaching and increasing facilities and equipment.

He has noted a change in the attitude of thought of the student body in that the difficulty of entering this College has led to a greater appreciation of the opportunities offered with a resulting stimulation to better scholastic work.

The Dean has made several addresses before medical societies, the most important of which was as the invited guest of the Pittsburgh Academy of Medicine to deliver the annual Emmerling Lecture.

THE MEDICAL SHOP

This activity is now functioning satisfactorily and efficiently. Having kept in rather closer touch with it the last six months, I am glad to report that its operation is carried on economically and that it gives prompt and satisfactory service to the various departments.

Department of Anatomy

Aside from the usual routine work the only matter on which the energies of the Department have been expended for the past year is the preparation of material for the course in Topographical Anatomy under Dr. Baker's supervision. This has taken the time of two student assistants for the greater part of the past year and has made possible the use of the freezing apparatus purchased about two years ago.

A word should be added in connection with the effort to cooperate with other departments, particularly with the surgery and surgical specialties on Dr. Baker's part and with Pathology and related problems on the part of Dr. Knouff and to some extent cooperation with Dr. Scott in connection with neurological problems. The cooperation of the Department in the conference during the past year should be mentioned, and this cooperation will be included under the list of problems being studied in the Department.

Two papers have been completed by the Chairman during the past year and accepted by the *Journal of Comparative Neurology* on "The Epibranchial Placodes of the Urodeles" and a second paper on "The Epibranchial Placodes of the White Rat."

Two papers have been completed by Dr. Baker in cooperation with Dr. Graves. The first on "The Human Brain Minus the Cerebellum" and the second paper on a case of "Cerebellar Agenesis in the Dog." Both of these papers are to appear, I understand, in the *Archives of Neurology and Psychiatry*.

Papers under way, in some cases approaching completion, are as follows: First, by Dr. Knouff, "The Developmental Pattern of Ectodermal Placode in Rana." This paper is so large that it will probably be divided and a portion completed under the title of "The Development of the Neural Plate in Rana." Mr. Knouff is also working on "The Effect of the Urine of Hyperthyroid Individuals on Amphibian Metamorphosis." This paper is just well under way.

Among the younger men on the staff a paper has been completed by Mr. Gerlinger on "The Descent of the Testis." A paper by Mr. Palmer on "The Development of the Human Lung" is well under way, as is also a paper by Mr. Hargraves, under the supervision of Dr. Doan, on "The Effect of Splenectomy on the Blood Cell Count in Birds." Several other minor problems, largely by candidates for the Master's degree, have been completed and are on file. Attention in this report is consequently called largely to problems connected in at least a remote way with medical education.

Department of Medicine

There have been no major changes in this department. The course offerings have been given as scheduled and carried out very efficiently.

Hospital Ward Walks have been organized in cooperation with the Department of Surgery. They have been chiefly for the benefit of the staff and have proven very stimulating to the interest and enthusiasm of the group as a whole. They have also attracted numerous physicians of the community as well as from surrounding counties.

Members of this department have contributed freely to the extension of the influence of the College by appearing on the programs of county medical societies. In this service over seventy such appearances have been made in the past year, and approximately thirty of these were by members of the Department of Medicine.

The State Street Dispensary

The report of this department emphasizes the very great need for increased facilities. The present economic condition has tremendously increased the demands upon the Dispensary. Two years ago in its report, the need for greater facilities and better quarters and equipment was urged on the grounds of the steady growth of the attendance for 1929-30. The number of visits was 30,777, for which the present facilities were strained to the utmost. In 1931-32, the reported attendance is over 53,140 visits with the *same equipment* and personnel.

It is only by the greatest effort and devotion of those connected with this service that it has been maintained.

Department of Obstetrics

This department has shown very gratifying activity and growth in service. Each senior now has the opportunity of observing 25 cases of labor and then personally conducts an equal number. This experience, we believe, is unsurpassed in the state or in many medical colleges elsewhere.

Dr. Rogers in a recent address states that the maternal mortality in Ohio decreased from 15.5 per cent in 1921 to 9.5 per cent in 1931 and draws the fair deduction that from the larger number of students graduated from this college in that period, the better training in this department may claim to have had no little influence in the mortality decline.

Incidentally it should be noted that in the clinic maintained by this department, the mortality rate is only 2 per cent. This remarkable record is maintained only by the careful training of the students, the thorough supervision of their attendance on the patients in labor, and last but not least the pre-natal observation and preparation of the patients.

This latter is carried on in the pre-natal clinic in the State Street Dispensary. Here 1,369 patients were cared for in 1931-32, with a total of 5,385 visits.

The Department would emphasize the efficient and hearty cooperation of the nurses of the District Nursing Association.

Department of Physiology

This department reports gratifying activity in research; fifteen projects were completed in 1931-32, the results of many being published or reported before scientific bodies, and the remainder are in process of publication.

The Department has labored under an increased teaching load the past year with a reduction in instructional force due to the retirement of Professor Bleile as Professor Emeritus.

The Dean held several conferences with the members of the Department with a view to a better correlation of the course offerings for the needs of the varying groups of students taught. Careful study is being made of the requirements of the several colleges from which students come to this department, and it is believed that certain reorganizations of courses may be made

which by concentration of effort will conserve time and teaching. The members of the Department are giving hearty cooperation in this study.

Department of Pathology

The Department of Pathology has experienced a very active and successful year. It has conducted 343 autopsies for the University Hospital, St. Francis Hospital, the Children's Hospital, the Franklin County Tuberculosis Sanatorium, the Franklin County Home, Columbus State Hospital, and the Coroner's Office. In addition there were several each month at White Cross Hospital. This service is of very great teaching value and is rapidly increasing. It is not only a valuable community service, but the recognized authoritative character of the reports is enhancing the influence of the Department. Also such a growth of autopsies greatly increases the amount of value of pathological material for demonstration to students.

The weekly pathological conferences in the hospital are attracting wide attendance; many physicians from the community and surrounding territory are regular visitors.

The separation of the laboratory of pathology and the laboratory of the hospital was brought about toward the end of the year. Dr. Spohr has relinquished his hospital service and will give full time to teaching of Clinical Pathology and carrying on elective courses and research. Dr. Reinhart has been transferred to full-time University Hospital service. It is confidently believed that this change will be for the betterment of both the College and the Hospital.

Department of Physiological Chemistry, Pharmacology, and Materia Medica

This Department has been carrying as heavy a teaching load as is possible with its present personnel. The College of Dentistry raised its requirement in Physiological Chemistry from three to ten hours on the assumption that this department would receive an additional instructor. No increase in the staff was granted, but the Department carried seven of the proposed ten hours. The fundamental course was increased from three to five hours and a new course, Physiological Chemistry 633, was offered to seniors in Dentistry. Course 631 was necessarily omitted owing to the lack of the additional instructor.

An increase is noted in the number of students applying for advanced work. At the June Convocation five students received their Masters' degrees for work in this department.

A gratifying amount of research and publications is reported and recognition by outside societies in the way of invitations for papers and election to official position are noted.

Department of Public Health and Hygiene

The report of this department shows that though the advanced courses given by Professor Hayhurst have had to be discontinued due to Professor Hayhurst's resignation, the regular offerings have been carried out by Assistant Professor Wilson and Assistant Professor Selbert. This has necessitated a heavy burden for Professor Selbert especially as in addition to her teaching she participated in many allied activities such as addressing nursing, girl-scout, and educational organizations on health topics.

It is to be hoped that early in the future additional personnel may be added to this department.

Department of Surgery

The Department of Surgery has developed the clinical teaching to a considerable extent by emphasizing the importance of Ward Walks, Pathological Conferences, and Surgical Conferences. Cooperation with the Department of Anatomy, Department of Medical and Surgical Research, and the Department of Pathology has resulted in special research problems in conjunction with these departments.

Dr. Reel's new textbook "Gynecology for Nurses," recently published, has created considerable interest.

The Department is looking forward to new developments in the near future.

Student Medical Service

This department has continued to develop during the past year as shown by the complete report sent under separate cover. You will note that since the reorganization in 1928 the activities have increased 13 per cent; dispensary calls for the past year totaled 22,428, with 5,805 new patients. Dr. Wilson feels that the general health of the student body has been excellent.

A new development of the Student Medical Service has been the Laboratory and Sanitary Section carried on by Dr. J. A. Beer. This service has included: supervision of dining halls as to cleanliness and quality of food supplies, basal metabolism determinations, physical examinations, examinations of blood, urine, sputum, smears, etc. The section conducting Periodic Health Examinations has also been developed under the direction of Dr. J. W. Wilce, and gratifying progress is noted.

Departments of Oto-Laryngology and Ophthalmology

There have been no outstanding changes in these departments. The members have carried the regular teaching load in a satisfactory manner and from material at hand are conducting research problems. Several talks have been given to medical society meetings by members of both departments. The course in Ophthalmology for Applied Optics students, formerly given by Dr. Frost, will be transferred to the Department of Pathology in the year 1932-33. Dr. Beatty during the past year received the honor of being made a Fellow of the American Bronchoscopic Society. This Society is limited to the outstanding men in this field throughout the United States.

Starling-Loving University Hospital

In the report of the University Hospital, the financial statement is encouraging considering general economic conditions. It shows a net gain from all operations over 1930-31 of \$5,941.39.

Since the installation of the new system of accounting through the Business Office and particularly with the cordial cooperation of the Assistant Comptroller, Mr. Miller, it is now possible to schedule the operation of each department.

The average occupancy for 1931-32 of 69 per cent has shown a slight decline (3 per cent) over the preceding year, but is well above the average occupancy of hospitals in general as reported by the Ohio Hospital Association.

As may be expected, the number of private patients has shown a slight decline (146) but in spite of this, the earnings of the various operations of the hospital show slight increase in almost every department. The Department of Physio-therapy is the only one showing any noticeable loss (\$503.00); due to the lack of patronage and the resignation of the nurse in charge of this service, the Department will be temporarily discontinued.

In regard to the cost per patient, I am pleased to quote from the report of the Assistant Comptroller, Mr. Miller: The average cost per patient day for the year was \$4.9893 compared with \$4.6893 for the month of June. This, we believe, indicates that the management is making progress in reducing the cost of operation and at the same time maintaining a high standard of service."

Department of Medical and Surgical Research

With the conclusion of the Summer Quarter of 1932, we shall have rounded out the first two years of existence of the Department of Medical and Surgical Research in the College of Medicine, Ohio State University. It was agreed before I undertook the organization and direction of this department that we should each survey the situation at the end of the two-year period and attempt to determine in how far the objectives of the venture had been fulfilled or were giving some promise of fulfillment. I, therefore, respectively submit herewith a brief résumé of plans and accomplishments as seen from the standpoint of the personnel in this department.

May I first of all express my own personal sincere gratitude for the whole-hearted cooperation which has been extended by yourself and the University Administration in every request that has come from us for the facilities with which to pursue our problems. I am very frank to say that any shortcomings or any lack of accomplishment which you or the Board of Trustees may have recognized must be attributed to myself personally and not to any of the other personnel of my department, nor to the Administration.

PRINCIPAL PROJECTS UNDERTAKEN

In this connection, may I commend to you each individual member of this department in his or her particular capacity, for without their loyal cooperation and enthusiastic support of every project in our program our studies would have been futile and ineffective. I have complete confidence in the ability and devotion of my personnel.

The principal problems within the Department itself which have been pursued during the past two years would come under the general headings of Tuberculosis, the Anemias (both primary and secondary, congenital and acquired), the Lymphadenopathies, the Deficiency Diseases involving the White Blood Cells (more particularly agranulocytic angina or malignant neutropenia), and Osteomyelitis.

In tuberculosis we have continued certain experimental studies which had been begun at the Rockefeller Institute for Medical Research. A further development of an understanding of the different types of clinical tuberculosis on the basis of varying virulence within the same pure strain of acid-fast organisms correlated with a difference in individual constitutional susceptibility in terms of specific cell types has been recognized. The difference in the pathology produced by so-called "R" and "S" acid-fast organisms has been shown. The possible relationship which Hodgkin's disease may bear to the avian tubercle bacillus is being investigated; and in one instance, at least,

an avian organism has been obtained from the lymph nodes removed at biopsy from a typical case of Hodgkin's disease. We have had splendid cooperation from Doctors Probst and Miller at the Franklin County Sanatorium in the study of clinical cases of tuberculosis. A preliminary report of these studies was made at the 1931 annual session of the Ohio State Medical Association in Toledo and has appeared in its published form in the *Journal of the Ohio State Medical Association*. Other manuscripts are in preparation as a result of this study, which has been continued during the present year. We have been able to apply the fundamental work which Doctor Wiseman has been doing on the lymphocyte and lymphoid tissue to clinical tuberculosis, and from the analyses it has become evident that qualitative changes in the lymphocytes in the peripheral blood in a tuberculous patient frequently reflect more accurately the state of defense of the body to the pathologic process than any other criteria yet established. It has been found that a gradually progressive secondary anemia accompanies the progressive disease, and in the attempt to correct this particular factor and thus indirectly affect the disease itself, large doses of iron have been given in selected cases to ascertain whether, as in other secondary anemias, an effective correction of this condition may be accomplished. Paralleling these clinical studies of the part which the anemia may play in the disease are certain animal experiments under controlled conditions, which have been under the direction of Doctor Yochem.

CLINICAL ANEMIAS STUDIED

We have been interested in studying the various types of clinical anemia. The rapid development of the various active principles in the treatment of pernicious anemia and various methods of administration have required a careful comparative study of their relative value in individual cases. The neurological manifestations in pernicious anemia still remain the most puzzling and the least effectively controlled of the symptoms in this disease. Some hope has been aroused that the intravenous administration of liver extract may help in this particular type of case, and studies are under way to test this observation further. The various types of secondary anemia are being analyzed as occasion presents, and very gratifying results have been obtained upon the institution of proper dosages of iron.

We feel that a very distinct advance is being made by Doctor Wiseman in his experimental and clinical approach to the diseases which involve primarily or secondarily the lymphoid tissues of the body. Great confusion exists with reference to classification in this general group of medical conditions and very little is understood of the underlying etiology. Doctor Wiseman's work has first of all dignified the lymphocyte with a definite position among the other white blood cells rather than explained its presence simply as a stem-cell from which the other white cells with more important functions may arise. He is making definite progress in a better understanding of the leukemias and their relation to varying grades of lymphocytosis. Infectious mononucleosis, which is endemic here on the University campus, is a disease which primarily affects the lymphatic tissues and is furnishing material for a further approach to the studies in this field. Some new data with reference to leucosarcoma and its relationship to lymphosarcoma, on the one hand, and to lymphoid leucemia on the other, have been obtained by Doctor Wiseman. This work gives promise of great significance.

For a number of years we have been interested in the condition of neutropenia, that is, a deficiency in the white blood cells which respond ordinarily

as a part of the resistance mechanism to pyogenic infection. Clinical studies with the nucleic acid radical based upon experimental studies have given some indication that we have in this physiological chemical the active principal which normally maintains the equilibrium between supply and demand in these cells in the body. We have shown in clinical cases that, following nucleotide injections, there is a bone marrow response of myelocytes in the peripheral blood comparable in every respect to the response of reticulocytes to liver extract or iron in anemia. Further intensive studies in this field are in progress at the present time.

In cooperation with the Department of Zoology and Entomology and Clinical Orthopedic Surgery, both fundamental and clinical studies in the treatment of osteomyelitis with fly larvae have been carried on within the past year and a half. Two publications in the nature of preliminary reports have appeared during the current year, and the study has now advanced to the point where a search for the effective active principles responsible for the undoubtedly better results that can be obtained with blow fly larvae is being undertaken.

COOPERATIVE STUDY IN OBSTETRICS

During the first year of the Department's existence Doctor Mercer acted as resident on our service in the Hospital and also assisted in the general problems of the Department, and in addition to these duties he pursued investigative work on the cellular reaction in clinical syphilis. These findings have been published. His leaving last September for a fellowship at the College of Physicians and Surgeons, New York City, is a distinct compliment to the school and will provide the type of eastern experience which we should desire for those of our men who may be able to take advantage of such training.

We have been impressed with the importance of pre-natal care with respect to the hemopoietic tissues of the mother, so that a study is now under way in cooperation with the Department of Obstetrics for the obtaining of data on selected prospective mothers during the first, second, and third trimesters of pregnancy. This is preliminary to a study of the hemopoietic efficiency of the new-born infant. We have collected data on premature births and have now a considerable series ranging from five to eight months, in which the peripheral blood count has been correlated with the state of hemopoiesis in the various internal organs from autopsy material. We are convinced that the so-called physiologic anemia which develops in the first two to four months of post-uterine life can and should be prevented through the supplementing of the dietary with minerals (iron and perhaps copper) which are important to hemoglobin formation. This study is planned to extend over a period of years and to be of direct benefit in our program of optimal prophylaxis for the individual in his combat with the environment for a healthy and happy survival.

HORMONAL CONTENT INVESTIGATED

In cooperation with the Department of Clinical Gynecology, we are assisting Doctors Reel and Horst in their fundamental studies of the hormonal content of various fluids. In this study uterine endometrium is transplanted into the anterior chamber of the eye so that observations may be made of the effectiveness of the fluids under consideration. Litter-mates are used and both male and female rabbits so that in the former all autogenous female sex hormones may be eliminated from consideration.

Doctor Dodd and his staff have been interested in studying the healing of brain tissues following various methods of incision. Rabbits are being used for this work and the facilities of our animal quarters have been made available for this work.

Plans are already formulated for a study of poliomyelitis in conjunction with the Department of Pediatrics, should an epidemic be precipitated in Columbus this summer. We are particularly interested in the information which a careful study of the peripheral blood may make toward early differential diagnosis.

In this department during the past quarter, three medical students have been actively engaged in independent problems having to do with some phases of the problems mentioned above. During the coming Summer Quarter Dean Houghton's son, of the University of Iowa College of Medicine, will attach himself to the personnel of this department and assist in the research program which will be pursued intensively during July and August. Also, Mr. Frank Cooper, from Doctor Patroff's laboratory at Saranac Lake, has asked the privilege of continuing some of his studies on tuberculosis with us in this department during the Summer Quarter.

We shall not attempt to outline further the problems in which this department is interested, though the foregoing does not by any means include all of the interests which are represented by the different members of the laboratory personnel. Our plans for the coming fall include the pursuit of problems which correlate closely with the field in which Doctor Curtis has been pursuing investigations. We have relationships which exophthalmic goitre and lymphoid leukemia may have to each other, the influence of thyroxin and cyanide on the lymphatic system, etc.

TEACHING ALLIED WITH RESEARCH

With reference to our teaching activities, it was thought at the time we originally planned the Department, in addition to providing facilities for individual research to especially interested and prepared medical students, we should, when invited, supplement with lectures, demonstrations, and clinics the regular established medical courses where our own investigations touched such teaching. The Department of Anatomy has been unusually gracious in permitting us to direct the work in Histology on connective tissues, normal blood, bone marrow, and lymphatic tissues. The Department of Pathology has permitted us to present the newer phases of tuberculosis in the second year; in the third and fourth years we have from time to time presented special clinics using the clinical cases which have been under study by this department. In addition to these contacts, Doctor Wiseman during the past year has been a regular member of the Saint Francis Clinical teaching staff, meeting students regularly two mornings a week. Both Doctor Wiseman and I welcome these general teaching contacts with medical students and are willing and anxious to extend this part of our work.

During the past two years, both Doctor Wiseman and I have made a considerable number of scientific addresses both within and without the state before various academies of medicine, and various state and national medical societies. I have made approximately sixty addresses, and Doctor Wiseman has spoken probably twenty times. May I, in this connection, emphasize the desirability of the members of the medical faculty attending during the year various worth-while scientific meetings which touch their respective fields of activity. It will enhance their own teaching enthusiasm and at the same time

indicate that those engaged in academic medicine in Columbus are enough interested in the progress of medicine as it is reported from time to time at these meetings to be in attendance.

May I once more say, Mr. Dean, with what readiness and even enthusiasm the various members of the medical faculty have cooperated in the extension of the work of the College and the University Hospital toward the field of research. The opportunities which exist here for studies which must increase our understanding and control of disease are limited only by our own vision and capacity. No one realizes more keenly than I how far short we have come of reaching the ideal which is always before us, but whatever measure of success has attended our efforts thus far gives me an undiscourageable and enthusiastic optimism for the future. and I can only say for myself that I have not had one single regret during the past two years that I decided to cast my lot with the College of Medicine at Ohio State University, so long as it may be satisfactory to yourself, the University Administration, and the Board of Trustees.

The following bibliography represents the published contributions and those at present in press from the members of the Department since July 1, 1930:

A critique of the more recent work in tuberculosis as it relates to diagnosis, prognosis and treatment (Doan), *Ohio State Medical Association Monthly*, 1931, 27, 292.

Studies on Tuberculosis (Sabin, Doan, and Forkner)

Chapter I. Reaction of the connective tissues of the normal rabbit to lipoids from the tubercle bacillus, strain H-37.

Chapter II. Reaction of the connective tissues of the normal rabbit to a water-soluble protein and a polysaccharide from the tubercle bacillus, strain H-37.

Chapter III. The derivation of giant cells with especial reference to those of tuberculosis.

Chapter IV. The relation of the tubercle and the monocyte-lymphocyte ratio to resistance and susceptibility in tuberculosis.

J. Exp. Med., 1930, 52, No. 6 (Supplement No. 3).

A study of the toxic properties of tuberculo-proteins and polysaccharides (Sabin, Miller, Doan, Wiseman).
J. Exp. Med., 1931, 53, 51.

The clinical implications of experimental hematology (Doan), *Medicine*, 1931, 10, 323.

Spontaneous and experimental infection of pigeons with *B. aertrycke* (Doan and Cash), *Am. J. Path.*, 1931, 7, 373.

The rôle of the lymphocyte in lymphatic leukemia (Wiseman), *Ohio State Med. Jour.*, 1931, 28, No. 7.

The importance of supplementing the clinical with laboratory findings in pulmonary tuberculosis (Doan, Wiseman, Mercer, Miller), *Ohio State Med. Assoc. Jour.*, 1932, May.

An improved direct method for obtaining the total white cell count in avian blood (Wiseman), *Proceedings Society for Exp. Biol. and Med.*, 1931, 28, 1030.

Preliminary observations on human blood in early syphilis by the supravital method (Mercer), *Proceedings Society for Exp. Biol. and Med.*, 1931, 28.

Criteria of the age of the lymphocytes in the peripheral blood (Wiseman), *J. Exp. Med.*, 1931, 52, 271.

The identity of the lymphocyte (Wiseman), *Folia haematologica*, 1932, 46, 346.

An analysis of the lymphadenopathy question with special reference to Hodgkin's disease and tuberculosis (Stewart and Doan), *Annals of Surgery*, 1931, 93, 141.

- The pathological physiology of blood formation (Doan), Practitioners Series, Blumer's System of Medicine, 1932.
- Treatment of osteomyelitis with fly larvae (Miller, Doan, and Wilson), *Ohio Journal of Science*, 1932, 32, 1.
- Pathological Bone Marrow (Doan), Handbook of Morphological Hematology, Paul B. Hoeber, 1932.
- The Baer-maggot treatment of osteomyelitis (Wilson, Doan, Miller), *Jour. A. M. A.*, 1932, 98, 1149.
- Current views on origin and maturation of cells of the blood (Doan), *J. Lab. and Clin. Med.* In press.
- New method for determining fragility of the red blood cells (Wiseman and Bierbaum), *Proceedings Society for Exp. Biol. and Med.*, 1932, 29, 835.
- The Neutropenic state, its significance and therapeutic rationale (Doan), *Jour. A. M. A.* In press.
- Nucleinate-induced extramedullary myelopoiesis (Doan), *Proceedings Society for Exp. Biol. and Med.* In press.
- The production of osteogenic sarcomata and the effects on lymph nodes and bone marrow of intravenous injections of radium chloride and mesothorium (Sabin, Doan, Forkner), *J. Exp. Med.* In press.
- Induction of lymphocytosis, etc. (Wiseman), *J. Exp. Med.*, 1931, 53, 499.
- Cervical lymphadenopathies, etc. (Wiseman). In press.
- In preparation, ten papers representing accumulated data on contemporary problems.

J. H. J. UPHAM, Dean,
College of Medicine

COLLEGE OF PHARMACY

Inasmuch as your office already has on file the records and statistical data relating to the teaching load of the various instructors in the College, it seems unnecessary to report such facts here. The same will, in general, apply to the data relating to the registration of the College. In comparing our last annual report with this one it will be noted that our registration is slightly below that of last year. In part this is due to our minimum four-year requirement, and also to the fact that students who are contemplating the study of pharmacy find that many of the schools are still offering a three-year curriculum. Beginning with the college year 1932-33, all schools holding membership in the American Association of Colleges of Pharmacy will go on a minimum four-year requirement, a fact which will more nearly equalize the requirements of the various schools. Undoubtedly the chief factor affecting our registration has been the unsettled business conditions. In consequence many prospective students have been prevented from entering the College through their inability to find work sufficient to enable them to defray their expenses or even a part thereof. While it may seem unfortunate that there has been a slight falling off in our enrollment, we cannot but feel that at the present time, and under the present economic conditions, we are graduating as many men as the profession and practice of pharmacy can absorb. After all it would seem that the College is and should be concerned not so much with numbers as with the character and quality of the men we are graduating.

NEW BUILDING PROVIDES FACILITIES

In recounting some of the activities and achievements of the College during the past year, emphasis should be placed upon the equipment and facilities provided in the new Pharmacy and Bacteriology Building. For the first time in the history of the College we now have ample space and equipment for carrying on the work. This fact has undoubtedly had a distinct influence on both the instructors and the students with the result that we have been able to do not only much better but a greater amount of work than in the past. Relative to our present equipment and facilities I might add that during the past several years I have visited quite a number of pharmacy schools for the American Association of Colleges of Pharmacy, and in few instances have I found a school with a better physical equipment than what we now have. While this does not hold good to quite the same extent so far as certain laboratory equipment is concerned, we have hopes, now that we have the laboratory space, that the much-needed equipment may soon be obtained.

* * *

In previous reports we have called attention to the growing demand for offerings for graduate work in the field of pharmacy, pharmacognosy, phytochemistry, and closely related subjects. Heretofore we have not attempted work of this character for the reason that we felt we did not have the space or equipment necessary. Now that we have the space and physical equipment for providing such work, it is hoped that provision may soon be made for

supplying certain much-needed apparatus. In further recognition of these needs it will be necessary to provide the instruction necessary to take charge of special problem and research studies. Another factor to be considered is that in the past the College of Pharmacy has supplied a number of teachers in the field of pharmacy. At the present time the demand for men with advanced degrees is increasing, not only in the teaching but also in commercial fields as well. If we are to meet this demand we must be in a position to offer such training and opportunity not only to our own graduates but to all others who seek such training.

In enumerating the many advantages offered in the new building the library should not be overlooked. While the library room is not as large as the College really needed, it nevertheless supplies a long felt want. In this is housed the books of both the College of Pharmacy and the Department of Bacteriology. It is supervised by a competent and well-trained librarian, assigned from the force of the University Library. While the number of books is not large, they cover quite a wide range of subjects, with quite a number of sets of journals and other reference material. All such material is of special value and interest to students and instructors in pharmacy and bacteriology, and to many others as well.

EDUCATIONAL AND COMMERCIAL DISPLAYS

While it has been impossible for us to equip the room intended for the "model drug store," we have been able to use the display windows to good advantage in giving instruction in "window trimming." This new feature has been of great interest and benefit to the students in enabling them to get some most excellent experience in this phase of practical work. The work is directly under the charge of Mr. Brown, assisted by Mr. Royle and Mr. McCullough. The work is carried on as a special laboratory assignment, most of the work being done in the evenings with specially assigned groups of students. The object of the work is to give the students the advantage of the experience as well as the opportunity to develop their creative and artistic ability. An effort is made to make the displays of two types: one the educational type displaying educational material; the other the commercial type exhibiting special commercial products. A number of most attractive displays have been made which have aroused a great deal of interest as well as most favorable comment from the many people who have visited them. While we have been quite successful in the window-trimming work, we are seriously handicapped through a lack of special equipment and display material and the cost of such. In partially overcoming this lack we are greatly indebted to various firms who have very kindly given us displays, or have loaned us the necessary materials. In view of this we wish to express our very deep appreciation to the Kauffman Lattimer Co., and the Orr-Brown and Price Co., who have repeatedly loaned us the much needed materials and fixtures necessary for the displays.

Another important feature of the building is our Museum Room for displaying our very complete collection of crude drugs, volatile oils, original packings of drugs, odd and rare containers, and other products. While the display is not yet fully arranged, it has attracted much interest and favorable comment not only from the students but also from the visitors and the many alumni inspecting the building. The display is not only attractive but highly instructive to all interested in the drugs and medicinal products used in medicine.

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CLAIR A. DYE, *Dean.*

COLLEGE OF VETERINARY MEDICINE

During the year 1930-31 there were enrolled in the College of Veterinary Medicine fifty freshmen, twenty-four sophomores, forty-one juniors, and thirty-two seniors. Thirty-two received the degree of Doctor of Veterinary Medicine at the June commencement. The year 1931-32 showed an increase in the number of students. There were enrolled in the College of Veterinary Medicine sixty-nine freshmen, thirty-nine sophomores, thirty-six juniors, and thirty seniors, one senior receiving the degree of Doctor of Veterinary Medicine at the close of the Autumn Quarter and twenty-nine at the June commencement. The increase in the number of students matriculating in the College of Veterinary Medicine is indicative of the renewed interest in the profession throughout the state and nation. It also is gratifying because much thought and effort have been given to the reorganization of the College of Veterinary Medicine during the period and intensive study made of the academic offerings. The future has a very bright outlook for enrollment in the College of Veterinary Medicine provided a normal development can be assured in the way of teaching personnel, equipment, and proper facilities in the way of buildings and grounds. Veterinary education throughout the nation has shown a marked trend upward during the past two years. Greater recognition of the value of the services of the profession not only to the livestock industry but to humanity as a whole have given a renewed impetus to the development of veterinary education. This has brought with it, naturally, a greater interest on the part of high-school graduates and consequently a rapid increase in attendance in the various colleges in the country.

The number of students at the present time taxes the capacity of the personnel of the College, its equipment, and other facilities. Should the numbers increase to any marked degree in the near future it will be impossible to give them adequate attention. The College as it is now constituted should not have more than thirty students in each of the four classes.

FACULTY CHANGES

There have been no faculty changes during the biennium except of a minor character. These changes, however, have been quite important in that it gives the College an opportunity to educate and train several each year for their Masters' degrees.

Dr. Theodore Fitzgerald, graduate assistant during 1931-32, will be a full-time assistant beginning with the Autumn Quarter 1932. He will devote his entire time to anatomy and histology. This arrangement will result in a much greater degree of efficiency in the instruction in the division of Anatomy.

Dr. John H. Knapp has accepted a position as House Surgeon in the Veterinary Hospital for the year 1932-33. This is an addition which has been needed for a number of years. It will augment the clinical staff and have present at all times a member of the staff to supervise all emergency cases coming to the hospital. This supervisory service will permit the other members of the staff more freedom for research activities and regular class preparation.

TEACHING

During this biennium there has been a much closer supervision of the teaching in all the divisions. This has resulted in a more efficient program, a higher standard of scholarship, greatly improved methods of teaching, and a marked improvement in the morale of the student body and the teaching staff. This is evidenced by the closer cooperation of the teaching staff with the student body and a decided improvement in the point-hour ratio of the students.

There have been frequent conferences of the staff relative to teaching methods, content of courses, and many other ways of bringing the teaching efficiency up to a higher standard. The teaching staff has received much inspiration and value from such conferences.

Continued study will be made in regard to teaching methods and course outlines so that they may be kept up to date at all times.

CURRICULUM STUDY

An intensive study of the curriculum was started in 1929-30 and has been in process of development during the present biennium. This entire study has been under the direction of Dr. W. W. Charters of the Bureau of Educational Research; without his guidance and valued advice and assistance it would have been impossible to have done this piece of work in a systematic and constructive manner. A committee of the faculty has been meeting frequently to analyze the mass of material obtained from a large number of sources which have a bearing on veterinary education. All phases of the subject have been given due consideration so that when it is finally completed it will be authentic. It is the intention of the College faculty to have a perpetual committee whose duty it will be to meet regularly and discuss and analyze all curriculum material. Yearly revision of certain courses will be considered or the entire curriculum. By this means it will be possible to keep the academic offerings of the College up to the standard to meet the ever changing conditions of medical education.

PERSONNEL WORK

During the biennium much progress has been made in the personnel work of the student body. A personnel bureau has been created under the direction of the Dean of the College. The systematic outline and ground work for this bureau was developed with the capable assistance of Dr. W. H. Cowley of the Bureau of Educational Research. A close supervision of the work of all students is possible in connection with this program. Conferences are held at frequent intervals with all students, a memorandum made of the subjects discussed and filed in a personal folder for each student. The personal folder for each student contains his high-school record, his personal memorandum, copies of all conferences with the Dean, college record, and notations made on special forms by the various instructors. The point-hour ratio is kept of each student so that information is available at once for any purpose. This personnel service has been one of the very important developments of the College during the past two years. The results have been very gratifying as it has been possible to materially raise the academic standards of the College and at the same time raise the point averages of the students. This program will be carried out in detail each quarter and improvements made whenever possible.

The personnel work has been of material assistance to the teaching staff not only in obtaining information in regard to students, but it has created

much interest resulting in the betterment of their own teaching activities. It has created a new spirit of cooperation and helpfulness among the entire staff and student body. This phase of the College work will be emphasized even more fully during the next biennium.

* * *

COURSE OF STUDY

In order to maintain the proper professional educational standards, the faculty has unanimously voted to lengthen the curriculum of the College from four to five years. This academic change will be in effect in 1933-34. Veterinary education requires at the present time, as is found in other professional colleges, a greater degree of cultural education along with a more intensive professional course. This change will permit the introduction of certain fundamental courses which have hitherto been impossible to include in the four-year course of study.

The College of Veterinary Medicine realizes the importance of this educational change to meet the present-day requirements of the profession. Veterinary education has reached the point when it is necessary to give education and training perhaps to a smaller group, but have them better prepared to meet the problems which have become vital to the development and maintenance of the live-stock industry.

EXTENSION WORK

While we do not have any provision for this type of service, considerable time and effort is necessarily devoted to meeting such requests. Correspondence, telephone communications, and personal conferences with veterinarians and live-stock owners become a part of the daily routine work.

In addition to this, calls are made upon the staff to assist with short courses for veterinarians given by various state colleges, and to appear upon the programs of national and state veterinary medical associations. It has been deemed advisable to grant such requests whenever it was at all possible to do so without seriously neglecting the duties at the College. Many of such requests are for the summer months and none of them represent any expense to the University.

During the past two years the chairman of the division responded to such requests as the following:

Virginia Veterinary Medical Association Meeting, Staunton, Virginia
New England States Veterinary Medical Association Meeting, Boston,
Massachusetts
West Virginia Veterinary Medical Association Meeting, Clarksburg,
West Virginia
Indiana Veterinary Medical Association Meeting, Indianapolis, Ind.
American Veterinary Medical Association Meeting, Kansas City,
Missouri
University of Louisiana, Short Course for Veterinarians, Baton
Rouge, La.
Texas A. & M. College, Short Course for Veterinarians, College Sta-
tion, Texas
Michigan State College, Conference for Veterinarians, Lansing,
Michigan

The staff is called upon to assist with county agricultural short-course programs, and to serve as live-stock judges at county fairs. Dr. Krill, during the past two years, has responded to such requests as these:

Dairy Day Program, Ohio Agricultural Experiment Station, Wooster, Ohio

Smith-Hughes Short Course Program, Waldo, Ohio

Farmers Institute, Westerville, Ohio

Ohio Brown Swiss Breeders Association, Richwood, Ohio

Defiance County Bull Association Meeting, Defiance, Ohio

Dr. Krill judged stock at the following fairs:

Butler County Fair

Williams County Fair, two years—cattle, horses, hogs

Logan County Fair, cattle

Brown County Fair, dairy cattle

Franklin County Fair, club work.

Reference has already been made to changes and improvements in our instructional work. With the completion of the work now in progress in the south wing of the old cattle barn, the facilities for housing clinical cases will be more adequate than heretofore. Such additional space is very essential for the development of cattle, sheep, swine and poultry divisions of our clinic.

It is to be regretted that it has not been possible to accomplish certain changes in connection with the offices and reception room in the clinic. The changes which were recommended and approved the Spring of 1931, are very urgently needed. The staff is handicapped for office space, and the waiting room is entirely inadequate. It is much too small, and the unsanitary conditions existing due to the type of floor and large number of animals brought into the room daily makes it dangerous to many of the patients.

Another very serious condition that would be corrected by making these changes is the lack of a ladies' rest room in this building. At the present time there are four girls employed in the Veterinary Clinic Building, and during the day there are numerous ladies and children waiting for patients. The need for a ladies' rest room is quite apparent under the circumstances.

Plans were worked out for this intended change and the work was to have been completed a year ago but due to lack of funds the project was delayed.

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O. V. BRUMLEY, *Dean*

DEAN OF WOMEN

Herewith are tables which show the analysis of the housing of undergraduate women in 1931-32.

On October 10, 1931, records of the Ohio State University yielded the following figures regarding the women then in attendance at the University:

Undergraduate women registered with the Dean of Women.....	2,541
Undergraduate women unregistered with the Dean of Women.....	65
Graduate women according to figures of Registrar.....	320
Unaccounted for (Columbus school teachers, etc.).....	190

Total according to the figures of the Registrar..... 3,116

TABLE I
HOUSING OF UNDERGRADUATE WOMEN BY CLASSES 1931-32

	Seniors		Juniors		Sophomores		Freshmen		Total		Per Cent
Type 1. Private houses.....	45		49		60		81		235		9.2
Type 2. University houses.....	63		47		43		32		185		7.2
Type 3. Sorority houses.....	104		56		59		0		219		8.6
Type 4. Private dormitories											
St. Hilda's.....	5		4		8		10				
Westminster.....	18	23	29	33	10	18	17	27	101	4.0	
Type 5. University dormitories											
Mack	11		15		27		56		109		
Oxley	4		15		23		33		75		
Neil	19		39		47		100		205		
Nurses Home.....	28	62	24	93	6	103	24	213	82	471	18.5
Type 6. Work in private homes	27		31		30		52		140		5.5
Total Types 1-6.....	324		309		313		405		1351		53.0
Type 7. At home—In town....	224		277		321		368		1190		47.0
Grand total of those registered—Types 1-7.....	548		586		634		773		2541		100.0
Unregistered with the Dean of Women	(14)		(23)		(11)		(17)		(65)		

TABLE II
ANALYSIS OF HOUSING OF UNDERGRADUATE WOMEN BY YEARS

	*1913-14		Fall Quarter 1929-30		Fall Quarter 1930-31		Fall Quarter 1931-32	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Type 1. Private houses.....	284	32	448	16.2	280	10.9	235	9.2
Type 2. University houses.....	...	..	288	10.4	280	10.9	185	7.2
Type 3. Sorority houses.....	19	2	270	9.7	250	9.6	219	8.6
Type 4. Private dormitories....	15	2	130	4.7	125	4.8	101	4.0
Type 5. University dormitories.	73	8	321	11.5	330	12.8	471	18.5
Type 6. Work in private homes	17	2	100	3.5	105	4.0	140	5.5
Total Types 1-6								
Out-of-town	408	46	1557	56.0	1370	53.0	1351	53.0
Total Type 7.								
At home—In town.....	473	54	1224	44.0	1199	47.0	1190	47.0
Grand Total	881		2781		2569		2541	

* Figures of Dean Breyfogle in report of 1914. Copied from stencil No. 515, 3/9/32. Ohio State University. Dean of Women.

Table I is an analysis of the housing of the undergraduate women at that time by classes. Attention is called to the trends in housing indicated in Table II, which analyzes the situation at four different periods.

I am also bringing forward, with additions from last year, the financial report of Pomerene Hall, which has never appeared in any of the public statements of the University. I suggest that it should also be preserved for future references. It will be noted in Table III that for the past two years we have been building up a surplus. This surplus must be drawn upon to the extent of \$800 this year in the reorganization of offices and for the repair of furniture.

TABLE III
POMERENE BOARD OF CONTROL
(Brought up to date August 1, 1932)

EXPENDITURES	1929-30		1930-31		1931-32	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
Salaries	\$ 6,940.00	57.77	\$ 6,917.08	58.59	\$ 6,338.79	60.35
Maintenance	1,483.46	12.34	1,336.25	11.31	989.31	9.42
Supplies	896.57	7.46	819.28	6.94	725.26	6.94
Books, Magazines, and Victrola records	257.75	2.14	160.26	1.39	182.50	1.73
Student Service	1,530.14	12.73	1,439.33	12.19	1,241.21	11.81
Equipment	350.52	2.91	479.08	4.05	211.04	2.00
Telephone	96.00	.79	96.00	.81	96.00	.91
	\$11,554.44	96.14	\$11,247.28	95.28	\$ 9,784.11	93.16
Dance Classes	457.73	3.81	557.75	4.74	516.10	4.91
Bridge Classes .....	.....	.....	.....	.....	203.52	1.93
Total expenditures	\$12,012.17	99.95	\$11,805.03	100.0	\$10,503.73	100.0
Total income	11,938.96		12,047.61		11,632.52	

Deficit.....	73.21	Surplus...	242.58	Surplus...	1,128.79
Plus fees reported after July 1, 1931.....			873.02	Plus surplus 1930-31.	1,115.60
			1,115.60		
		Surplus June 30, 1932.....			\$ 2,244.39

The report further contains a description of forms used for various purposes in accumulating information and making announcements, these forms being adapted to the various purposes which the office is serving. Therefore, they give a large view of the activities of the staff of the Dean of Women. These forms become useful after the proper conferences have been held with the students and their situation has been clearly understood. The University's effort to look carefully after the housing and living accommodations and practices of women students makes the office of the Dean of Women a very busy place. The purpose is to become well acquainted with these students and their needs.

ESTHER A. GAW,
Dean of Women

DEAN OF MEN

To counsel with men students continues to be the principal function of the Dean of Men. Personal, social, financial, and educational problems are brought to him for aid in their solution.

Officers of student organizations are depending upon this office in many instances for help in determining policies. Their greatest handicap is the lack of a fund of experience on which to draw, and it is here that the Dean of Men functions rather than in a strictly supervisory way.

We continue to check the financial operations of student organizations through the Auditor for Student Organizations. Her detailed report will be made at a later date. During the year we began to audit the accounts of those fraternities whose credit rating was unsatisfactory together with an equal number who voluntarily requested such service. Mr. Fred Strother has acted as Fraternity Auditor since September, 1931, and his work has received commendation from local and national fraternity officials. This service is paid for by the fraternities themselves and costs the University nothing.

The extra-curricular activities of the University have progressed satisfactorily with the exception of the Scarlet Mask Society. It is recommended that the Director of Dramatic Activities be made responsible for all phases of production including eligibility of persons participating, and financial policy.

The Council of Student Affairs has given valuable assistance whenever called upon during the year for aid in determining policies. We have maintained a register of social events and of chaperons in this office. As might have been expected, the social life of students was more economical during the past year than it has been for many years.

The deferment of fees reached such proportions that the President ordered the practice discontinued with the Spring Quarter, so that this office is now relieved of a tremendous load at the beginning of each quarter.

The Dean of Men continues to serve on the following committees: Student Loans, Conduct in Examinations, Superior Students, Council on Student Affairs. He acts as adviser to Phi Eta Sigma, Freshman Scholastic Honor Society, and to Sphinx, Men's Senior Honorary. He corresponds and counsels with parents of men students, visits students ill in University Hospital, serves on local, state, and national councils of the Student Y.M.C.A. and in general carries on such activities as may build and maintain student morale.

Men's Housing Bureau

The Men's Housing Bureau and Fraternity Relations are directed by the Assistant Dean of Men. His report follows:

"The Bureau continued its general program of assisting students and members of the faculty in obtaining desirable rooming accommodations. Rooming House Permits from the City Health Department were made a prerequisite to registration of rooming houses. Inspection by this office was then made of each registered house. Many disputes arising between students and householders were arbitrated. We have pursued a policy of cooperation with householders and find them in general to be quite responsive. Near the close of the year we advocated the adoption of a rule by the University which would

provide a penalty for those students who tried to avoid payment of their debts to householders. The adoption of the proposed rule by the faculty is the most constructive step the University has taken in promoting the housing of its men students since the Housing Bureau has been in existence. The fair administration of this rule will do much to improve housing facilities in the district and will certainly improve the attitude of the householders toward the University.

FRATERNITY RELATIONS

"During the past year we continued to direct all University Relations with fraternities. The centralization of all university-fraternity relations into one office and under one adviser has resulted in a constructive program for the fraternities and a fine spirit of cooperation with the University. We served as adviser to the Fraternity Affairs Office, Council of Fraternity Presidents, Professional Interfraternity Council, Interfraternity Pledge Council, Fraternity Advisers' Council, Managers' Association and Booking Association. All contacts with national fraternity officers are referred to us.

"Five fraternities were compelled to suspend operations because of diminished membership and poor financial condition. In general, however, our fraternities are weathering the economic crisis quite satisfactorily.

"As the definite constructive program for our fraternities gains headway, we are pleased to note and report an increasing interest on the part of members of the faculty who are also members of fraternities, as well as many other alumni in the city. We are quite sure that the attitude of fraternities toward the University is much more cooperative and sympathetic than it has ever been before.

"Our Interfraternity Organization is now preparing its first annual report to the President. This report will state all achievements of our fraternities during the past year as written by students who have participated in the program."

Fraternity Auditing

(Prepared by Fred Strother to send to persons asking for information about our system.)

About one year ago, it was found that the fraternity auditing was beginning to take a great deal of the Student Auditor's time, she having approximately 160 organizations under her supervision, ranging in income from two or three dollars to \$15,000 per year. At the same time, the service to the fraternities was obviously very valuable, and well worth enlargement and a full-time basis of operation.

What basis should be used in establishing separate supervision for fraternities? Should the University undertake a system of compulsory auditing for all fraternities, or should the service merely be thrown open to all groups, on a voluntary plan? Neither was practicable under present circumstances. The compulsory system as used at Miami would bring in some eighty fraternities, and possibly thirty sororities, necessitating the employment of three or four auditors to handle the work, either at a large cost to the University or an arbitrary rate to the organizations, regardless of their present financial status and at the expense of a splendidly cooperating fraternity system.

Joseph A. Park, Dean of Men, and Fred J. Milligan, his assistant, hit upon a plan which they believed would solve the problem, given the time necessary for development. For several years, the Columbus Credit Men's

Exchange has, at the request of this office, listed the fraternities just as they do ordinary business establishments, as having A, B, or C credit standings. "A" indicates prompt payment of bills; "B" indicates payment within thirty days; "C" indicates thirty days or more, slow in payment. A "D" rating is issued for those fraternities who have payable accounts in the hands of attorneys.

It was decided to direct all fraternities having a credit rating of "C" or lower to submit their records for audit monthly. A charge of ten dollars per month was established as the auditing fee, or approximately \$100 per year of ten months. Supplies were to be furnished at no extra cost.

Realization that this system would probably cause a wholesale emergence from the "C" grade was offset by the belief that fraternities and their officers could be "sold" on such a system, so that the plan would develop through voluntary enlistment. This also would further the splendid spirit of cooperation which already existed among the organizations here. The "emergence" took place, only five of the eighteen groups of "C" grade in October were listed as being of that status in January, but to date no fraternity having raised its credit has chosen to leave the service.

The auditor's position was made flexible, so that by extending real service to the fraternities, he might strengthen his office and in time make it more remunerative.

GENERAL RESULTS OF FRATERNITY AUDITING

1. A constant factor in a changing organization.
2. Develops sense of responsibility in treasurer. Also good training for him. Gives him a clean "bill of health" each month.
3. Source of accurate, timely information for:
 - a. Chapter
 - b. House Company
 - c. Alumnus Adviser
 - d. Central Fraternity Offices
 - e. The University
4. Stimulates interest of chapter officers in welfare of their group.
5. Serves as a mediary between merchants and fraternities.
6. Source of comparative information on efficiency of charges to members and standard of expenses, especially those relating to cooks' and house-keepers' salaries, and food costs.
7. Advisory on adjustments in departments of fraternity so as to obtain the maximum efficiency of operation.
8. Ultimately, the goal of fraternity auditing is "A" credit, with maximum payments being made on mortgages and to house companies, near-perfect collections, and operation at the lowest cost to individual members.

SUCCESS OF PLAN THIS YEAR

One year is a short space of time in which to measure the success of such a plan. To date, credit ratings have been raised materially, collections are evidently improving, chapters are becoming a little better balanced in their operation. A number of fraternities have entered the system this year on a voluntary basis, and others have evidenced a desire to enter next fall. It is interesting to note that the chapters, operating independently, which are the most successful this year financially have been utilizing the monthly audit. One chapter, which I would consider almost perfect in financial condition and operation, has been having the audit made every school month since 1926, when the first Student Auditor supervised their accounts.

* * *

J. A. PARK, *Dean of Men.*

ENTRANCE BOARD

I have the honor to present to the President and to the Board of Trustees the annual report of the Entrance Board for the year ending June 30, 1932.

COMPARATIVE ADMISSION STATISTICS

	<i>New Students</i>	
	<i>1931-32</i>	<i>1930-31</i>
Agriculture	387	394
Agriculture—Veterinary Medicine .....	.....	.....
Applied Optics	23	19
Arts and Sciences	1,152	1,151
Arts-Commerce .....	.....	.....
Arts-Education	8	10
Arts-Engineering .....	.....	.....
Commerce and Administration.....	780	747
Dentistry	20	13
Arts-Dentistry .....	.....	.....
Science-Dentistry .....	.....	.....
Dentistry-Education .....	.....	.....
Education	1,102	1,106
Engineering	539	668
Law	52	49
Arts-Law .....	.....	.....
Commerce-Law .....	.....	.....
Medicine	30	27
Arts-Medicine .....	.....	.....
Graduate-Medicine .....	.....	.....
Science-Medicine .....	.....	.....
Nursing, School of	64	41
Nursing, Education-Science	51	.....
Pharmacy	42	48
Veterinary Medicine	61	59
Graduate School	956	863
Totals.....	5,227	5,195

FRESHMAN CLASS

There exists a small decrease in the number admitted to the freshman class from high schools this year. We admitted 2,275 from Ohio high schools and 329 from high schools outside the state. This is a decrease of 95 students although an increase of 10 from Ohio high schools. The decrease of 105 in freshmen from high schools outside the state may be explained by the refusal of 121 non-resident students because of low scholarship in high school.

GRADUATE SCHOOL

A total of 1,548 students entered the Graduate School this year, showing an increase of 198 over last year's admission to this School. The greater part of this increase was in the group of students with degrees from this University, although there was a gain of 73 in the number of graduate students new to our campus. The graduate students in their previous preparation represent 208 colleges and universities in the United States and other countries.

* * *

FRESHMEN

Since the admission of freshman students is closely related to the work of the Junior Deans, the University Examiner has, during the past year, met with the Junior Deans on a number of occasions. It should be noted also that the Examiner met with the Junior Deans in their annual conference at Toledo. This gave the University Examiner an opportunity to become better acquainted with the problems of the offices of the Junior Deans. In this conference a number of policies were agreed upon with regard to future admission of freshmen. We have noted that some students have been admitted to the University who, perhaps, should not have been admitted or to whom we should have suggested they secure better preparation before admission was granted to the University. In order to protect ourselves in the future and perform the best possible service from an educational point of view, we have agreed to

CLASSIFICATION OF FRESHMAN BY HIGH-SCHOOL GRADES

COLLEGE	NUMBER OF FRESHMEN	UPPER		MIDDLE		LOWER	
		No.	Per Cent	No.	Per Cent	No.	Per Cent
Agriculture	264	101	38	123	47	40	15
Applied Optics	14	5	36	5	36	4	28
Arts	763	323	42	324	43	116	15
Arts-Education	4	3	75	1	25	.....	....
Commerce and Adm.	559	194	35	226	40	139	25
Education	430	213	50	147	34	70	16
Engineering	425	194	46	171	40	60	14
Nursing	59	31	52	20	34	8	14
Ed.-Science Nursing.	10	4	40	6	60	.....	....
Pharmacy	32	7	22	18	56	7	22
Veterinary Medicine.	41	10	24	21	52	10	24
Totals	2,601	1,085	41.2	1,062	40.8	454	17.4

write to these students and suggest ways and means of improvement before entering college. Already we have had results in following this procedure. For example, quite recently a student applied for admission when he would have been conditioned in three subjects. The Examiner wrote him and suggested he take one more year of high-school work. The student agreed to spend the additional year in high school before entering the University.

The Junior Deans and Examiner have agreed upon a policy and a procedure relative to entrance conditions. It is the duty of the Examiner to record the conditions, and it is the duty of the Junior Deans to follow up these conditions and require them to be removed as early in the course as possible.

These are only a few examples of the close relationship existing between the Examiner and the Junior Deans.

During the year the high-school certificate has been revised in order that the information found on the certificate might be more useful in the offices of the Junior Deans and Secretaries. In this connection, I might state that the admission blanks have not been completed as satisfactorily as we like and, therefore, this year the Examiner called on a number of the principals, especially the high-school principals of Columbus, and solicited their cooperation. It is a pleasure to state that the high-school principals have cooperated with us and the certificates are made out satisfactorily.

COLLEGE DAY

College Day is a new day in the high schools of Ohio. The idea originated at Findlay and is becoming quite widely spread over the state. The purpose of the day is to acquaint the high-school boys and girls with the colleges of the State. A great many of the high schools believe it is better to have all the representatives of colleges assemble on one day to give out information to their high-school pupils rather than have them visit the high schools on different days. The representatives have aimed to dignify the day and eliminate the objectionable features such as competition, inducements, recruiting, et cetera. The colleges have aimed to present their offerings in a dignified fashion. This year the Examiner, or some other representative of the University selected by the Examiner, has attended College Day activities at the following high schools: Coshocton, Findlay, Norwood, Warren, Niles, and Girard. We have received other invitations but could not accept all invitations. this year. On all of these occasions we have had an opportunity to discuss college opportunities with a great many people interested in colleges and especially with freshmen, sophomores, and juniors. This gives an opportunity to offer some guidance assistance which we feel is very important.

* * *

ADMISSION TO PROFESSIONAL COLLEGES

The selection of students for the College of Medicine continues to be an important problem for the Entrance Board. All available material on the newest and best procedures has been studied, and it is believed that every factor is included in consideration of these candidates. The Board takes into consideration the personality and character of the candidate in addition to those qualities which may be rated on paper, such as the time spent in pre-medical training, the point hour ratio in all the preliminary training and in the pre-medical sciences alone, the intelligence rating, the aptitude test rating, and the geographical location of the home of the candidate.

The one hundred students of the freshman medical class were selected from 250 actual candidates. A total of 1,161 expressed the desire to become candidates for admission but their applications were discouraged for various reasons, the greatest of which was that 700 of the group were not residents of the State of Ohio.

Each year we study the causes contributing to the failures in the freshman medical class and upon the basis of these studies try to build a more thorough sifting process. The number failing in the freshman medical course decreases each year. This year's freshman class lost only seventeen by failure; the peak number of failures was found in the year 1928-29 when 35 failed and were dismissed from the College of Medicine. This improvement may be due in part to the increased number of factors being considered in the selection of the medical students.

NORTH CENTRAL ASSOCIATION

The President is well acquainted with the Examiner's activities in the North Central Association of Colleges and Secondary Schools. From the standpoint of the duties of the University Examiner, it is essential that he be well acquainted with the colleges and high schools in Ohio and, so far as possible, with those outside of our State. The Examiner is fortunate in having been chosen as chief inspector of colleges for the Commission of Higher Education,

and through this appointment he has had an unusual opportunity to visit colleges and universities. His election to the Commission on Higher Education, which is the voting body of the Association, was very significant as it gives the University representation on this Commission. Other members of the Commission elected this year are President Chase of Illinois, Dean Effinger of Michigan, President Morehouse of Drake, and the Dean of St. Louis University.

The President appointed the University Examiner as the University's representative on the State Committee of the Secondary Commission of the North Central Association. This committee is composed of a representative from the State University, one from the State Department of Education, a high-school principal, and a superintendent of schools. There are 305 North Central high schools in Ohio, and the committee has examined their annual reports and made recommendations to the North Central Association. Several high schools applied for admission this year and their applications were given careful consideration by the committee.

OHIO COLLEGE ASSOCIATION

It is important for the Examiner to keep in close touch with the colleges of the State. For a number of years he has held the chairmanship of the Committee on Membership and Inspection of the Ohio College Association. This committee is composed of Dean Schoonover of Marietta College, President Zook of University of Akron, Treasurer Cartmell of Ohio Wesleyan University, and Dr. G. Andrew Hedger of University of Cincinnati.

The committee visited St. Mary's of the Springs College and Kent State College on behalf of the Association this year for the purpose of considering their applications for admission to the Association. The committee's recommendation for membership was accepted by the Association. The Association thought that a number of the colleges holding membership should be visited and asked the chairman to make these visitations. The member colleges visited this year were Findlay, Mt. St. Joseph, Bluffton, Hiram, Defiance, and St. Johns Colleges and John Carroll and Toledo Universities.

It is necessary also to visit unaccredited colleges located in our State, for example, Wilmington College and Wilberforce University. Quite recently Dr. McPherson and Dr. Klein accompanied the Examiner to Wilmington College for the purpose of determining upon what basis credits completed in Wilmington College should be evaluated. In May Professor Lumley and the Examiner visited Youngstown College for the same purpose. More recently Professor Denune of the Department of Sociology and the Examiner visited Schauffler School of Cleveland. The University received an invitation to visit St. Charles Seminary at Carthagenia; Dr. Klein accompanied the Examiner on this visit. It should be stated that these invitations are initiated by the colleges concerned. They look to the University for this leadership, and as a clearing house for the evaluation of credits completed in unaccredited colleges. It is obvious that the information gained is of great value to our University in the adjustment of credits presented here and also places the State University in an advisory position for other colleges making inquiry concerning the standing of colleges within our State.

B. L. STRADLEY, *University Examiner.*

JUNIOR DEANS AND THE JUNIOR COUNCIL

1928-32

HISTORICAL BACKGROUND

The five junior deans of the University and the Junior Council submit herewith a report of their four years of work from 1928 to July 1, 1932. We should like first to review the circumstances attending the creation of the junior deanships and the Junior Council.

A Central Committee on the Freshman Problem was appointed under the chairmanship of Professor V. T. Thayer. Sub-committees were organized. Discussions began with vigor. Plans evolved. The two major developments from these discussions were the inauguration in 1927 of Freshman Week and the establishment in the fall of 1928 of junior deanships in the colleges of Agriculture, Arts, Commerce and Administration, Education, and Engineering. The proposal for the organization of these latter offices was made to the faculty on February 16, 1928. The Central Committee submitted to the faculty among others the following propositions.

1. That the character of the student body in the first two years of the University was such as to call for rather distinctive treatment.
2. That the needs of the students in these two years are not being sufficiently provided for under present conditions.
3. That agencies should be developed and created within the several colleges which will effect more direct consideration upon the work of the first two years in these colleges.

The Committee recommended that the Board of Trustees authorize the appointment of a junior dean in each of the five colleges named, that a Junior Council of the University under the chairmanship of the President be organized consisting of the five junior deans and other members of the faculty selected by the President, that the Junior Council be charged with the duty of studying all matters common, or which might be common, to the several colleges pertaining to: (a) the guidance of freshmen and sophomores, (b) the instruction of freshmen and sophomores.

* * *

Soon after the Central Committee submitted its report, the University Faculty discussed and approved its recommendations, which thereupon became the recommendations of the University Faculty. As such they were transmitted to the Board of Trustees for their consideration and action. During the subsequent months the Board of Trustees in turn approved the proposed program, and five junior deans were appointed to assume office on October 1, 1928. At the same time these five officers together with President Rightmire and Professor W. W. Charters were organized as the Junior Council. Professor W. H. Cowley was added to the Council a year later.

With the recommendations of the Central Committee on the Freshman Problem, duly approved by the University Faculty and the Board of Trustees, as their definite charter, the junior deans and the Junior Council have been working for four years. Our activities have been numerous and varied. Our problems have been extensive and often complex. But we have engaged in

four years of work which have been at once stimulating and we believe productive. It is not possible in this report to discuss all our work, but we submit herewith a summary of our major enterprises under four headings: student guidance or personnel activities, instructional activities, evaluations of our work, recommendations for the future.

STUDENT GUIDANCE OR PERSONNEL ACTIVITIES

In his foreword to a preliminary report of the Central Committee on the Freshman Problem dated June 21, 1927, President Rightmire expressed "the conviction that the great growth in numbers of students has led to a declining personal contact between student and instructor with the consequent neglect of the individual needs in the en masse technique development." He further stated that "a different treatment of the beginning students is conclusively indicated and a study of methods now possible for humanizing freshman and sophomore students and counseling. . . ."

In these brief statements student guidance and personnel activities are aptly defined. Every year approximately three thousand new students present themselves upon the Ohio State University Campus for instruction. In the days before the University had grown so large, personal contacts between students and instructors were generally considered to be natural concomitants of university life. With the tremendous increase in numbers between the years 1915 and 1928 these contacts inevitably grew fewer and fewer until students, faculty members, and administrative officers all recognized the need of establishing machinery of some sort which would enable students to have the counseling upon their educational and other problems that has historically been associated with a college education.

It was into this situation that the junior deans were introduced in the Fall of 1928. For some years the Dean of Men, who up to that time had had the title of Student Counselor, the Dean of Women, the University Examiner, and the college officers had been counseling with students. The number of underclassmen had grown so large, however, that it was impossible for the then existing agencies to provide for all students needing assistance. The University has a counseling program, but it was not sufficiently extensive or intensive to meet the growing needs of the situation. Immediately upon their appointment, therefore, the junior deans took their places among these counselors, set up offices in their respective colleges, and proceeded to establish contacts with students, parents, instructors, and secondary schools. Since that time they have worked in close touch with the personnel offices which existed at the time of their appointment. Many of the activities that they have undertaken have been developments of practices already in vogue. Some are new. But in this report we are listing all without any attempt to account for their genesis. We should like to take this occasion, therefore, to testify to the abundant co-operation that we have enjoyed from all of these officers who from the beginning have been eager to have us succeed and anxious to have us associate ourselves with the work in progress. The personnel counseling activities undertaken in cooperation with these already existing personnel agencies may be summarized as follows:

I. CONFERENCES WITH STUDENTS

Educational counseling with all students

1. Attempting to hold at least one personal conference with each student during the year to discuss whatever problems may be confronting him and to have

him know the Junior Dean of his college is available to assist him in every possible direction. Special attention is given to the following groups:

Students whose parents attended Freshman Week to discuss special problems of their sons and daughters.

All transfers from other institutions.

All students entering with conditions.

All students reported in need of special attention by Freshman Week advisers.

All students making low grades at mid-quarters.

All students reported by members of the faculty as needing counseling of one sort or another.

2. Conferring with students who come voluntarily or who are called for interview about

Making schedules.

Changing schedules.

Dropping courses.

Withdrawing from courses.

Excessive absences.

Choosing curriculum.

Planning majors and minors.

Transferring to another college within the University.

Transferring to other educational institutions for work not offered at Ohio State University.

Setting up properly balanced extra-curricular programs.

Making up entrance conditions.

Budgeting study time.

Discovering and developing special interests.

Organizing out-of-course readings.

Adjusting incompatibilities with instructors.

Improving study habits.

Selecting senior advisers.

Encouraging and arranging for personal relationships between student and faculty members.

Putting students in touch with professional societies and clubs.

Preparing petitions.

3. Making arrangements for deviations from stated requirements to meet the individual needs of students. Numerous examples of this particular type of counseling might be cited, but one case record is perhaps sufficient for illustration.

Stanley H., originally interviewed last year, was, according to his high-school record and his percentile of 65, just another "average student," though 26 years old and a former enlisted man in the Navy. His first two quarters of University work yielded a point-hour ratio of 3.6, and he was encouraged to schedule extra hours. Since then he has carried 20 to 23 hours each quarter, with a total point-hour ratio of 3.2—including not only difficult scientific courses in the Physical Education major but also extra courses in Philosophy, Fine Arts, History, and Psychology. Interview contacts with this young man have unquestionably (1) stimulated the range and quality of his intellectual curiosity and achievement, (2) revealed to him his own capacity for distinguished performance in an area unsuspected, (3) enabled him to advance his graduation by three or more quarters (an important consideration for one of his age.)

Educational Counseling with Gifted Students

The development of the gifted student is essentially the concern and opportunity of the instructional staff, but the junior deans have worked with the conviction that in personal conferences with these especially endowed

freshmen they might do much to motivate them to their best work and to convey to them the concern of the University for their maximum development. This phase of the program has included the following activities:

1. Conferring with students averaging B or above in order to facilitate their development.
2. Encouraging these able students to carry more than the usual number of hours of course work. An example of this sort of counseling is the case of Samuel E.

This student has an intelligence percentile of 96, was inordinately reserved and evidently the victim of an exaggerated inferiority feeling. The Junior Dean called him in for interview. He is the son of a Jewish rabbi and has taught Hebrew to younger children in the synagogue. He loves languages, but is aware of the prejudices against Jewish teachers in the public schools—and is therefore uncertain as to career, failing to enroll for any foreign language. The student is encouraged to learn of his high percentile, stimulated to know of his distinctive capacity for scholarship. Interested inquiry into his language-liking reveals a philological bent. He is referred to a faculty member in a foreign-language department for further consultation, and the Junior Dean suggests a heavier than normal schedule during the following quarter, including some foreign language. The student subsequently scheduled 23 hours, including Latin and Spanish, receiving the grade of A in all subjects except Military Science, in which his grade is B. Later he undertakes German, in addition to Latin and Spanish, continuing with four 5-hour subjects, earning a total point-hour ratio of over 3.5 in four quarters of work. The boy, encouraged by the professor to whom he was referred, is now embarked upon a Ph.D. career in languages and philology. Much of his shyness has been overcome. He has been strengthened by success, is intent upon a goal, reveals a complete transformation from the "forgotten freshman" of the initial interview.

3. Arranging for admission of gifted freshmen to courses normally closed to them such as Political Science 401, Sociology 401, etc.
4. Arranging with the consent of the Graduate School for the admission of freshmen where desirable to 600 courses sometimes without the catalog prerequisites.
5. Assigning gifted students to sections working at faster paces than the average section in cooperation with the Departments of Chemistry, Romance Languages, German, and others.
6. Encouraging achievement worthy of recognition by Phi Eta Sigma, Scholaris, and other honorary societies.
7. Motivating these more-than-usually able young men and women to develop their capacities commensurate with the opportunities the University affords.
8. Writing congratulatory letters, or awarding certificates of merit, to students making high grades, thus attempting to motivate them to continued good work.
9. Writing the parents of these students to apprise them of the success of their sons or daughters.
10. Writing letters to high-school principals of these able students that they may know of the success of their former charges.
11. Helping to arrange dinners in several colleges each quarter for gifted freshmen.

Educational Counseling with Unsatisfactory Students

The erroneous notion has grown up in some places that the junior deans devote the greater part of their time to counseling with unsatisfactory students.

This is in no sense true. They do spend an appreciable amount of their time attempting to assist freshmen with various types of handicaps, but a proportional share of their time is spent with gifted and average students. This is as it should be since the great majority of students are doing passing or better than passing work. There exists no justification, however, for neglecting unsatisfactory students, many of whom through careful guidance bring their work to creditable standings. The junior deans, therefore, have attempted through their four years of work to assist every freshman in need of help so that when he leaves the University, either by his own choice or because of his inability to do acceptable work, he will feel that every possible effort has been made by the officers of the University to help him succeed. The activities with unsatisfactory students have therefore been the following:

1. Arranging for remedial instruction of students doing poor or failing work. Students fail in their college work for a variety of reasons, some academic, some personal, some physical. In assigning students for remedial instruction an attempt is made to secure with the assistance of other university personnel officers, a complete appraisal of these factors. The details of the remedial instruction program for freshman and sophomore students will be described later in this report.
2. Submitting to the Executive Committee recommendations for the readmission of students who have failed out, but who seem likely to succeed if given another opportunity.
3. Helping students on probation to improve their work in order to return to normal status.
4. Arranging for students with entrance conditions to take special work in order to dispose of their admission deficiencies. In this connection one of our number has arranged for evening classes in the Columbus Evening High School. Students are informed of the availability of these night classes in high-school subjects, and many have taken advantage of them to work off their conditions.
5. Assisting students who have failed out of the University to make plans for the future. It is the conviction of the Junior Council that the University has a responsibility to society to help every student who leaves the University because of failure to canvass his abilities and to make plans for their development elsewhere. To turn a student thoughtlessly from our doors without advice and guidance seems to us to be socially reprehensible and in no way defensible. Because of this conviction the junior deans have made every effort to assist failing students to new adjustments.

Vocational Counseling

Many freshmen are in need of vocational counseling. Some have not decided upon what occupations they plan to enter and are worried because of their indecision; others have made decisions with which they are not satisfied; and still others change their occupational plans as a result of their university work. From among these three groups numerous students come to the offices of the junior deans asking for assistance in deciding upon their careers. Our activities in this area are the following:

1. Helping students to arrive at vocational choices.
2. Helping students to evaluate vocational choices already made.
3. Assisting students to arrange study programs in line with their vocational objectives.

4. Referring students in need of vocational information and specialized advice to members of the faculty in the various academic departments.
5. Promoting the development of a national vocational guidance program: Two of our number are closely associated with the American Council on Education which for the past two or three years has been developing a plan for publishing monographs with accurate and complete descriptions of the occupations which college students enter. When these monographs have been prepared, the colleges of the country will have at their disposal descriptions of several dozen occupations which may be used in counseling students. Meanwhile the College of Agriculture has published a bulletin entitled "What Would a College Education in Agriculture Mean to Me?" the College of Education another entitled "Do You Want to Teach?" and the College of Engineering a third entitled "The Usefulness of Mathematics to Engineers." These bulletins have been of great assistance in our vocational counseling.
6. Helping students to secure practical vocational experience during the summer months.
7. Arranging for vocational lectures. During a series of lectures arranged by the Arts College the professional careers in Law, Dentistry, Medicine, Teaching, Research, and Business were presented by various members of the faculty. In 1930-31, 96 students attended the lectures. In 1932 some of the addresses delivered were printed in a pamphlet entitled "Opportunities in Medicine, Dentistry, and Law." This pamphlet was distributed where it would be most helpful, as was also a pamphlet entitled "Women in Business" among women students. Similar lectures have been arranged for students in several of the other colleges.

The responsibility of assisting college students in their choice of vocations constitutes one of the major concerns of student personnel administration in every college and university in the country. Because the problems of students are similar in every college, we are in need of a national program which the American Council on Education proposes to establish. Until the American Council is able to raise the necessary funds, personnel counselors all over the country must of necessity be handicapped in this work since it is impossible for any one university adequately to finance a comprehensive program. The Temporary Personnel Council in its report submitted to the President on June 15, 1931, proposed a plan for the development of our vocational counseling here at Ohio State University, but in the large we are dependent upon some national agency before we may accumulate the information and develop the techniques that are all important in this field of counseling.

Personal Counseling

Besides educational and vocational problems, students are harassed by numerous other considerations. These veer off in many directions and influence the students' adjustment to the community life and also to their academic work. Of necessity the junior deans spend a considerable fraction of their time talking with students about these problems which, if they are not disposed of, more often than not make for failure and many types of maladjustment. The more important of the activities in this area are as follows:

1. Employment and financial problems

Referring students to the part-time employment office maintained by the Y. M. C. A. and the Dean of Women. In some cases the junior deans themselves are able to secure employment for students directly.

Writing letters of recommendation for students seeking part-time or summer employment.

Arranging for loans and scholarships.

Arranging with the Deans of Men and Women for deferred payment of fees as necessary.

Adjusting study schedules to provide for part-time employment.

Conferring with employers in order to assist students to secure changes in their working hours where conflicts between working hours and study hours arise.

2. Health problems

Referring students in poor health to the Student Medical Service.

Referring students with poor hearing to the Phonetics Laboratory.

Referring students with problems of emotional maladjustment to the Psychological Clinic.

Advising faculty members about the necessity of special seating for students with poor sight or poor hearing.

Arranging study schedules for students whose health require readjustments.

Visiting students confined to the University Hospital.

3. Extra-Curricular problems

Discussing choices of fraternities and sororities.

Assisting students in determining upon which extra-curricular activities to enter.

Counseling with students who have assumed too many or too few extra-curricular commitments.

4. Housing problems

Helping students to find new and better rooms when sanitary, study, and general living conditions are not satisfactory.

Acting as mediators between incompatible roommates.

Arranging study schedules for students who commute.

5. Religious and race problems

Referring students with religious conflicts to the Y. M. C. A. and Y. W. C. A., to members of the faculty, and to local clergymen.

Aiding Jews, Negroes, and other students with sensitive race adjustment problems.

Helping illuminate the attitudes of the University concerning the relationships of science to religion.

Putting students in touch with churches and other religious groups.

6. Social problems

Referring socially undeveloped or maladjusted students to the Dean of Men and the Dean of Women, the Director of the Ohio Union, or to other members of the University staff who may be able to assist them.

Conferring with fraternity and sorority officers about the problems of their freshmen and sophomores.

Helping students develop social attributes by discussing their deficiencies in speech, personal appearance, mannerisms, etc.

Helping students make personal contact with other students.

Advising students who have not been elected to fraternities and sororities how to go about being elected, or how to organize their social and other activities in the event that they are not invited to membership.

7. Other problems

Assisting students to adjust differences with parents or guardians.

Advising with students whose work is suffering because of emotional crises of one sort or another.

Assisting students in their personal development generally.

To enumerate these many types of personal counseling is merely to give a hasty overview of what is being done in helping students to attain the equilibrium that is necessary for successful college work. A member of the faculty of the University of Michigan has recently written a volume entitled "Student Maladjustment." In this book he includes case histories of dozens of students who are seriously handicapped if not actually overwhelmed by problems in the categories we have just listed. From our four years' experience we too might produce an array of case histories that would be equally impressive. In this brief report it is not possible to include more than one or two of these biographies, but nevertheless we should like to urge upon all who read this report the tremendous significance of personal counseling. The adolescent as he enters college is a most insecure individual. He has in many cases left home for the first time. He has come in contact with a new range of knowledge. He is forced to appraise concepts which he has always taken for granted. He is, moreover, during this period of life projected into a series of physiological, emotional, and intellectual conflicts which in the great majority of cases he is not able to resolve without the assistance of more mature individuals. Helping students solve these problems is at once an obligation and an opportunity of pressing importance both for the University and society at large.

The number of personal contacts with students made by the junior deans during the course of a year is large. The following table, which gives a four-year summary of the number of interviews held by one of our number, will serve to illustrate the work of the entire group:

	Voluntary	Required	Total
1928-29.....	103	613	716
1929-30.....	604	733	1,337
1930-31.....	310	781	1,091
1931-32.....	508	635	1,143

II. RELATIONSHIPS WITH PARENTS

When a university officer works closely with the educational, vocational, and personal problems of students, he must also in many cases work with their parents. This is true at least with the junior deans. Parents of Columbus students are so closely in touch with the work of the University that they find it natural to telephone or to call upon the advisers of their sons and daughters. People throughout the State frequently come to Columbus to see their children and often drop in to see one or another of the junior deans. Many of those who do not come write instead.

These contacts constitute an important part of the work of our offices. Ours is a state institution, and we have the responsibility of acquainting the people of the state with the fact that students are being given every opportunity at their state-supported University to develop their potentialities and to succeed in their work. Because of this consideration, and also because of the effect upon student morale of close parental interest, we consciously cultivate our contacts with parents, chiefly as follows:

1. *Interviewing parents who attend Freshman Week:* The Freshman Week Parents' Conference brings several hundred parents to the University. They listen to the President and the other officers of the University who address them. They meet informally members of the instructional staff who also attend the conference. Many of them visit the junior deans.

2. *Interviewing parents who come to the offices of the junior deans during the year to discuss:*

Scholarship problems	Behavior problems	Family conflicts
Housing problems	Vocational plans	Finances
Health problems	Social development	

3. *Corresponding with parents:* Writing parents of students requesting confidential information which will help the junior deans in their work. This letter, addressed at the beginning of each academic year to all parents and guardians of freshmen, asks their cooperation in seeing that new students make full use of the junior deans' offices.

Corresponding with parents concerning probation, dismissal, university rules, and numerous other considerations arising out of student conferences including those listed above: When a student is in difficulty, frequently the junior dean writes to his parents. Many of these letters are written to explain University rulings so that parents may understand what may happen or has happened, and why.

Our files contain many letters from parents expressing appreciation for the counseling which had been done with their sons and daughters. One picked at random will serve to illustrate the gratitude of parents for the friendly assistance and advice that their children are receiving at the University:

Dear Dean

Joe received his report card today and while his marks could hardly be bragged upon, he did show some improvement. Next year, believe his average marks will continue to improve.

This letter is to thank you, personally, for your kindness and interest throughout the year. From this long distant view of his year at Ohio State, I feel certain that he has much improved in many ways. Believe his average school work showed some improvement each term.

In particular, I see a big improvement in Joe's personal manner and his attitude toward others.

When I think of the tremendous plant you have at Ohio State and the vast amount of work you have personally, as Junior Deans, I am doubly appreciative for the interest you have shown.

Very sincerely yours,

.....

Writing congratulatory letters to parents of high standing students: Naturally the parents of students in difficulties are those whom the junior deans see or correspond with most, but through congratulatory letters contacts are made with the parents of superior students which are valuable, we believe, in maintaining through the State a recognition of the interest of the University in able students.

III. CONFERENCES WITH INSTRUCTORS

Ideally every instructor is also a student counselor. It is patently impossible for the five junior deans to counsel with every freshman and sophomore in the University as frequently as desirable. There are almost five thousand of them. Obviously, they must give their attention to those urgent and complex cases that members of the instructional staff do not have the time to handle.

To promote counseling with freshmen and sophomores, therefore, the junior deans are continuously in touch with the members of the instructional staff about a variety of problems associated with students as individuals and as groups. These are summarized herewith.

Anent Individual Students

1. Furnishing instructors with information about students. Later in this report we shall describe in detail an interviewing device which we have called Interview Sections. With a view to the effective administration of these sections, instructors are furnished with information concerning the students therein enrolled. This information includes all the important data concerning the student's high-school record, his intelligence percentile, his interests, his vocational ambitions. In addition to this formal information, instructors are also provided with any other available data about a student that they may care to have.
2. Adjusting student-faculty incompatibilities.
3. Discussing the needs of particular students either by helping set up projects for students with special interests, or by assisting in planning remedial work for handicapped students.
4. Arranging for students to withdraw from courses for legitimate reasons, to make up incomplete work, and the like.

Anent Groups of Students

1. Interpreting students' points of view to faculty members: It is inevitable that students should frequently confide to junior deans their reaction to particular instructors and courses. This information is often of considerable value to the supervisors and to the instructors themselves. By communicating such insights as come to them the junior deans are frequently able to contribute much to the more efficient teaching of courses.
2. Keeping in touch with instructors by attending departmental luncheons.
3. Promoting faculty-student interviews either by means of interview sections, or by other devices.
4. Assisting instructors in developing skill in interviewing: Interviewing is not, contrary to the belief of some, easy or natural for all individuals. Some members of the instructional staff have little natural inclination for conference work. The junior deans have therefore spent considerable time in helping younger instructors to develop interviewing abilities.
5. Furnishing records to senior advisers: When a student becomes a junior he passes out of the jurisdiction of the junior deans and into that of a senior departmental adviser. The information which the junior dean has accumulated about a student during two years of contact is of considerable value to his senior adviser. It is our responsibility to pass along these data.

Anent the Work of the Junior Deans

Since the junior deanship is a comparatively new office in the University, many members of the instructional staff are not well informed of our activities. As opportunities permit, the junior deans, therefore, meet and talk with instructors who teach freshman and sophomore students in order that they may learn of the work that is being attempted. Obviously it is impossible for us to do as much of this sort of interviewing as we should like, and only one of

our number has succeeded in interviewing all instructors of underclassmen. The junior deans have felt that, if the idea of personal relationship is to be maintained between students and instructors, there must be a similar close personal relationship between instructors and themselves. They have, therefore, every year talked with instructors of freshmen expressing the conviction that it would be unfortunate if the personnel work of the University should be neglected by instructors with the belief that the junior dean alone has responsibility for counseling.

IV. RELATIONSHIPS WITH SECONDARY SCHOOLS

A closer articulation between secondary schools and colleges has for a long time been a desideratum of forward-looking educators. Articulation is of two sorts, subject-matter articulation and administrative articulation. To promote the latter of these the University Examiner has been working diligently for more than a decade. He has developed contacts throughout the State and nation that are of great importance and value to the University. In this work the Junior Council has joined forces with him since their counseling with freshmen brings them in contact with considerable data supplementary to his. As described earlier we are in close touch with parents of freshmen and sophomores, and similarly on occasion we are in touch with secondary-school principals and superintendents.

With the Examiner we have been making continuous efforts to promote closer relationships with the advisory systems of high schools and the student counseling being done here at Ohio State University. If carefully thought out and well-managed advisory systems were in vogue throughout the high schools of the state, many students who now are admitted to the University would, because of advice from high-school counselors, never have attempted college courses. Many others with various types of problems would have been well on the road to remediation before coming to the University. It is because of our realization of the importance of high-school guidance and of the value of closer relationships with secondary-school people that we have associated ourselves with the University Examiner in promoting secondary-school contacts as follows:

1. Cooperating with the State Department of Education in its high-school guidance program; Early in 1930 the State Department of Education sponsored a conference of superintendents and high-school principals to sensitize them to the need of counseling within the high schools. In the setting up of this program the Junior Council cooperated extensively with the State Department. The Council continued to cooperate with the Department during the year or so in which the State Director of Education and his assistants developed their program throughout the State. Unfortunately budgetary considerations have made it necessary to curtail this endeavor, but while it lasted it developed an awareness upon the part of secondary-school administrators to the pressing need of well-organized student counseling in the high schools of the State. The foundations have been built for an impressive program when state finances permit its further development.
2. Preparing and distributing a bulletin entitled "A Suggested Program for Pre-College Guidance in High Schools." Written by the Junior Council in cooperation with Professor H. A. Toops of the Department of Psychology, this bulletin brought together the major facts about the prediction of college success and failure which Professor Toops has been collecting for ten years.

The significance of high-school scholarship, intelligence test scores, study habits, age, self-support, and numerous other considerations were discussed. Secondary-school administrators were through these pages given the benefit of a decade of University research upon these problems and were thus able to counsel more effectively with their students.

3. Writing a bulletin for high-school students entitled "Preparing for College." The bulletin described above was addressed to secondary-school administrators. It proved so successful that the Junior Council thought it desirable to write a similar bulletin for high-school students. Such a bulletin has therefore been prepared during the past year and will be distributed to the high-school students of the State during the fall of 1932. The scope of the bulletin may be gleaned from the chapter headings:

Who Should Go to College?

What Makes for College Success?

How to Study

Choosing Your College Courses

What Ohio State University Does to Help Students Succeed

4. Preparing and distributing a pamphlet for Columbus high-school students: Because an appreciable number of our freshmen come from Columbus high schools, during 1930-31 the Junior Council prepared and distributed in cooperation with the Columbus Board of Education, a pamphlet entitled "Information for High-School Pupils Preparing for College." This pamphlet was put into the hands of all high-school students in Columbus schools and included a discussion of entrance requirements, the relationships of intelligence test scores and high-school scholarship to college success, and other pertinent data about the University. As a result of the publication of this pamphlet Columbus high-school students have been made more fully aware of the need of careful and adequate preparation for college, and many of them arranged immediately for conferences with their teachers and principals in preparation for college entrance. This pamphlet was later distributed to all students in the high schools of Franklin County.
5. Holding conferences and carrying on correspondence with principals: At the time the pamphlet for Columbus high-school pupils was published, Superintendent Collicott of the Columbus public schools associated himself with President Rightmire in calling a joint conference of the principals of Columbus high schools and the junior deans. This conference led to a closer understanding between the University and the schools of Columbus. It is the plan of the Council to develop similar liaisons with public-school systems in other parts of the State using as the basis of such conferences the bulletins already described. Already three such conferences have been held, one with the superintendents of schools in the environs of Columbus, one with the Franklin County Superintendent of Schools and the principals of his high schools, and one at the time of the 1931 Ohio State Educational Conference with the superintendents of schools from Cleveland, Cincinnati, Akron, and several other large cities. In addition to these conferences the junior deans have been carrying on correspondence with schoolmen all over the State concerning various freshmen and sophomores formerly enrolled in their schools. From the beginning it has been a practice to write high-school principals informing them about the success of any of their students who have been especially successful at the University. Occasionally we have

also corresponded with principals about their less able graduates seeking from them information and cooperation of various sorts. If money were available, it would be desirable for the University to send to high-school principals each quarter the grades of their former students. This would be an added clerical expense, but the resulting benefits in closer university-secondary-school articulation would justify the outlay. If school administrators and teachers could be regularly informed of the end results of their teaching, the effect upon their work would be marked and valuable.

6. Addressing secondary-school groups throughout the State: Every year all of the junior deans are on numerous occasions called upon to address high-school assemblies, school masters' clubs, and sectional meetings of the Ohio State Educational Conference and of the Ohio College Association. These speaking engagements bring the junior deans into happy relationships with secondary-school people and make for closer and more complete understanding between the University and the schools.
7. Participating in vocational conferences for high-school students in and about Columbus under the auspices of the Y.M.C.A. and Y.W.C.A.

In general it may be said that these secondary-school relationships of the University are of considerable significance in furthering the sympathetic understanding that should pervade the thinking and associations of administrators and teachers on all levels. The educational enterprise has for administrative reasons been divided into several divisions—elementary, secondary, and higher. These, however, are artificial divisions which only partially mesh with the education needs of students. The machinery of education should not interfere with the educational process itself, and it has therefore been a much-stressed purpose of the junior deans to develop those relationships with the high schools of the State which will promote student development and adjustment before and after admission to the University.

V. COOPERATION WITH THE FRESHMAN WEEK COUNCIL

In the introductory pages of this report it has been observed that the Central Committee on the Freshman Problem proposed two innovations on the part of the University to meet the freshman problem. One of these was the installation of five junior deans, the other the inauguration of Freshman Week. The relationships between these two administrative devices is and, of course, must be close. The Junior Council has from its inception, therefore, cooperated with the Freshman Week Council, the chief executive officer of which is one of our number. Assistance has been given annually in securing members of the faculty to serve as Freshman Week advisers; in addressing parents of students at the Freshman Week Parents' Conferences; and in meeting and talking in groups with all the students enrolled in our respective colleges. Two of our number have served on the two faculty committees which the President appointed to evaluate Freshman Week. For administrative purposes the junior dean's office and the Freshman Week Council have been set up as separate units, but organically they are closely related, and through several years that relationship has been fostered by both agencies.

VI. SOPHOMORE COUNSELING

When a student has been at the University for a year, he is in need of much less counseling than the student who has just arrived. The junior deans

therefore see fewer sophomores than freshmen, but sophomores are by no means neglected. During their freshman year they learn that the junior deans are available for discussing with them any problems they may have on their minds, and thus many of them come in voluntarily for conferences. Others are called in for various purposes.

In addition to these conferences the College of Education has for two years sponsored a program called "Sophomore Week" at which time conferences are arranged for sophomores both as individuals and groups. Various members of the college faculty address groups of students on careers in teaching English, Foreign Languages, Elementary Education, History, and Science. The requirements for success in these departments of teaching are discussed and course sequences in various majors are outlined. At the conclusion of the addresses the faculty members are available for individual conferences.

"Sophomore Week" in the College of Education has been a successful enterprise for two years. It has come to be recognized as a permanent institution. In future years the idea will more than likely be taken up by other colleges. It is a device which focuses the attention of students upon their imminent choice of majors and which brings students again in close contact with faculty members and the counseling program of the college. As such it has been eminently practical and desirable.

INSTRUCTIONAL ACTIVITIES

It will be recalled that the Central Committee on the Freshman Problem proposed that the junior deans be concerned not only with the counseling of freshmen and sophomores, but also with the improvement of their instruction. In this work we have cooperated extensively with the supervisors of elementary courses and with departmental chairmen. The activities that we describe in this section of our report represent cooperative enterprises some of which have been initiated by the Junior Council and some by supervisors and department heads. Many of these developments were already under way before the appointment of junior deans. In reporting them in this place we are making no attempt to review their histories. The need for improving freshman instruction has been recognized almost universally, and many individuals have joined their intelligence and energies in the enterprise. Our contribution has been one among many. The endeavor has been a cooperative undertaking from the beginning.

Our major contribution has been in interpreting the needs of students to members of the faculty, needs which are brought home to us as we counsel with students. In our conferences with instructional administrators in the junior division we have sought to interpret the points of view of underclassmen and to assist in developing machinery for the more complete engagement of student energies and abilities in their university work.

* * *

INTERVIEW SECTIONS

In the section of this report devoted to counseling activities reference has been made to the interview section technique which we should like at this time to describe in more detail. It would be unfortunate if members of the instructional staff should avoid or neglect contacts with students because of the establishment of a counseling program in the offices of the junior deans. It is impossible and undesirable for the junior deans and other personnel officers

to do all the interviewing with students that is done in the University. Faculty members in order to keep in close touch with the psychology of the student body must of necessity see and talk with numerous students about all sorts of considerations. Much of this counseling can, of course, be left for students and instructors to arrange between themselves, but it has seemed to us that some facilitating machinery might be desirable. The junior deans have, therefore, from their first year promoted interview sections as a device for bringing teachers and underclassmen together. In a large number of instances we have been able to demonstrate the utility of an instructor's meeting outside of class each student in his courses at least once a quarter. In this quarterly interview the work of the course is discussed in relationship to the individual capacities of the student being interviewed. The instructor in this fashion comes to know his students more intimately, and with the information he thus gathers he is able to gauge his work more effectively. At the same time he occasionally comes across information that would be of value to the junior deans in their work with students. He transmits this information on a special form provided for the purpose.

After this technique had been in operation for a year, a large number of students were asked for their unsigned opinions of the value of these interviews. Almost unanimously they expressed themselves as most enthusiastic over the plan and proposed its continuance and further expansion. Because of the budgetary problems of the University, it has been necessary to increase the size of classes and the teaching burden of numerous instructors. For this reason interview sections during the past year have been fewer than heretofore, but the program is by no means at a standstill. We hope that before long we may include even more instructors in this work than during the past three years. The chief purpose of the interview is to bring the instructor and the student to a better understanding of one another. There can be no doubt of the resulting benefits both for the instructor and for the student.

* * *

THE SELECTION AND TRAINING OF INSTRUCTORS OF ELEMENTARY COURSES

It is almost a platitude to observe that not every college instructor is equipped to teach freshman and sophomore courses. Members of the faculty whose chief interests are in research and advanced work are often unable to comprehend the intellectual and experiential limitations of beginning students. They may do splendid work with advanced students, but they are often not successful in understanding the peculiar needs of students being introduced for the first time to a new subject matter. The selection, therefore, of instructors for freshman and sophomore courses has especially engaged the attention of the President, the supervisors, and the junior deans for the past few years. Several supervisors have been more than usually diligent in their efforts to appoint instructors at once interested in freshman and sophomore teaching and capable of organizing their courses with the psychology of such students uppermost in their minds. In this work the junior deans have co-operated.

After instructors have been selected, many of them are in need of training. The majority of the members of the Junior Area instructional staff are younger men who are still doing graduate work or who have recently completed it. They are, therefore, in need of considerable supervision and training. Toward this end we have encouraged supervisors in promoting class visitation,

in holding staff conferences where methods of teaching and the more difficult points of subject matter are discussed. The major function of the University is instruction. The University, recognizing this fact, must keep ever alert to develop the new and younger members of the faculty that they may rapidly become able and stimulating teachers of the students in their charge.

EXAMINATION METHODS

During the past few years perhaps the major development in higher education has been the attention focused upon techniques of examination. So important has this become that the General Education Board has made a subvention of \$500,000 for a ten year study of examination methods. This money is being administered by a national committee, of which one of our number is a member. At the same time the University of Chicago, in reorganizing itself along divisional lines, has adopted a comprehensive examination program. To develop and administer these examinations at the University of Chicago, a Board of Examiners has been established with a budget of \$50,000 a year under the able direction of Dr. L. L. Thurstone. Other universities are working in this field, notably the University of Minnesota, Columbia University, and Ohio State University. The work that we are doing here at Ohio State ranks as one of the most important of these ventures. Until recently new type examinations were chiefly of the true-false and completion types, testing no more than the student's mastery of information. Dr. R. W. Tyler of the Bureau of Educational Research, however, has during the past three years developed techniques to measure a student's ability to make and test generalizations and hypotheses, to handle scientific instruments, and to apply the scientific method. His endeavors in this wider field of examinations have been so successful that he has been invited by the American Council on Education to write a large portion of a volume which will within the next few months be published as an examinations manual for the colleges of the country.

We cite Dr. Tyler's work at this time because the Junior Council and several of the junior deans have been working with him closely in the application of these examinations techniques to elementary courses in various departments of the University. The major work has been done in the Departments of Botany, Zoology, and Home Economics. He is also working with the Departments of Chemistry, History, Geography, German, Romance Languages, Engineering Drawing, Agricultural Engineering, and several others. In the judgment of the Junior Council there exists no more important development in higher educational instruction than this having to do with examination methods. Withing the next few years it seems to us inevitable that scientific, objective methods of testing a student's mastery of a subject will be developed and applied in the great majority of American colleges. Meanwhile, Ohio State University is in the forefront in this work and will, therefore, be closely in touch with its progress and expansion.

SIZE OF CLASSES

Since his inauguration President Rightmire has been unusually interested in elementary instruction, and toward that end he has promoted the theory that University classes, especially for freshmen and sophomores, should be as small as the finances of the University will permit. The Junior Council has, therefore, been concerned with the relative values of large and small classes and at this time we should like to submit a brief discussion of the subject.

When the need for financial economies in education is acute, the problem of class size becomes urgent. The monies spent for instruction constitute the major cost of an educational institution. Hence the number of students cared for by an instructor is related directly to educational costs. Investigators have been studying the effects of classes of varying sizes for more than ten years. These studies were begun in the high schools, but interest in the problem quickly reached colleges and universities, and in 1924 a committee was appointed at the University of Minnesota to encourage investigations of class size in that institution. The Minnesota report is undoubtedly the most widely known record of the study of this problem.

PROBLEM OF CLASS SIZE STILL UNSOLVED

An exhaustive investigation of large and small classes should show to what degree students in classes of varying sizes attain each of the important objectives of instruction when each class is taught by the best procedure known for that size of class. Surprisingly enough, none of the studies reported thus far have taken into consideration this factor of differential instruction depending upon class size. In general the effects of large and small classes have been compared when both have been taught by the *same* procedure, i.e., the lecture method. Furthermore, results have been measured only by examinations which revealed the amount of information remembered by students. With these limitations in mind, the status of these class-size studies may be summarized somewhat as follows: in imparting information which is to be remembered, lecturing to a large class of students is fully as effective as lecturing to a small class. Obviously lecturing is but one of several instructional devices, but investigators to date have been studying the lecture technique only.

Recognizing the inadequacy of these investigations, supplementary studies were three years ago begun at Ohio State to discover the relative effectiveness of large and small classes upon other types of student achievement in addition to the recall of information. Zoology 401 presented itself as a course in which such an experiment could be conducted because objective examinations for that course had already been constructed. These examinations tested not only the student's memory of zoological information but also his ability to apply the principles of zoology to problems new to him, his ability to interpret experiments similarly new to him, and his ability to plan a controlled experiment.

RESULTS IN ZOOLOGY 401

In this experiment Dr. D. F. Miller, during the autumn of 1929, taught two classes of different sizes: a large class of 99 students and a small class of 33 students. The teaching method used with the large class provided for one-hour lectures or demonstrations three days each week and for two two-hour individual laboratory periods each week. This was the most effective method for science work known for large classes, and the instructor was considered by students and faculty to be a very effective lecturer. In the small class the teaching procedure included demonstrations, discussions, and individual laboratory work guided by discussions. The small class met one hour each day five days in the week so that the small class spent two hours a week less in session than the large class.

In studying the relative performance of these two groups, twenty-five students from the large class were paired man-to-man with twenty-five from the small class. Pairings were made with reference to intelligence percentiles and scores made on a pre-test in zoology. The two paired groups were thus

made up of students of equal intelligence and of equal zoological information at the beginning of the experiment. Their performances might, therefore, be compared to discover the relative merits of the two teaching procedures followed. At the close of the quarter this comparison was made. The examination records of the two groups were studied. A comparison was also made of the average examination score for the entire class of 99 students and the average for the 33 students.

The results for the two groups were strikingly dissimilar. The twenty-five students in the small class made a higher average achievement on the examinations than did the corresponding twenty-five students in the large classes. The difference in favor of the small class was four times its probable error, which is statistically highly significant. In seventeen of the twenty-five pairs the students in the small class made higher scores than those in the large class; in four of the pairs the students in the small class made the same scores as those in the large class; in only four pairs did the students in the large class make higher scores. When the average examination score for the entire 99 was compared with the average for the 33, the difference in favor of the small class was even larger. Confirming the Minnesota report, students in the large class did as well in the recall of information as those in the small class, but on every other part of the examination the achievement of the small class was higher.

A second investigation in class size has been undertaken to determine the effect upon grades of definitely arranged faculty-student interviews following the interview-section technique already described. Interview sections obviously are arrangeable only in relatively small classes. It is impossible for an instructor of a large section to interview very many of his students. When discussing this instructional method, the question naturally arises: do students in small interview sections do better work than students in large non-interview sections? The results of our investigation, although obviously not conclusive, have given an affirmative answer. Studies of the results of interviewing at Ohio State show that students in interview sections make higher grades.

"INTERVIEW SECTION" STUDIED

A carefully controlled comparison was made in Botany 401 and 402 during the Winter Quarter 1930 and in Botany 401 and Zoology 401 during the Autumn Quarter 1930. In each of these comparisons, students in interview sections were paired with students who were not in interview sections but taught by the same instructor. The members of each pair had the same intelligence percentiles, the same marks in previous courses in the subject, and the same scores upon a pretest in the subject.

During the course all students were given the same objective examinations, and the scores of students in interview sections were compared with the paired students in non-interview sections. These comparisons were made with 199 pairs of students in botany taught by four instructors and with 155 pairs of students in zoology taught by six instructors. In both subjects the average achievement of students in interview sections was higher than that of students not interviewed. The difference was not only statistically significant but was on the average equivalent to more than half of a letter grade, that is, more than half of the difference between an A and a B or between a B and a C or between a C and a D.

These studies indicate that at Ohio State small classes and a relatively small number of students assigned to an instructor result in higher student

achievement when educational objectives other than the recall of information are considered. That these other objectives are of great social utility no one can doubt. Almost every critic of the colleges directs his barbs against courses which burden students with facts without educating him to assimilate them in his living or to seek out new ones on his own. The success of an educational institution must be measured in terms of thinking graduates rather than in terms of merely well-informed graduates.

Some institutions have recognized the limitations of large classes, but at the same time they have attempted to effect the economies that they permit. Dean J. B. Johnston of the University of Minnesota proposes that large lecture sections be provided for the presentation of subject matter, while small groups of students are directed in their study and discussion by tutors and assistants. Under the new plan at the University of Chicago, there are large sections for lectures and demonstrations and small discussion groups. The shortcomings of these two plans lie in the fact that the direction of study and discussion is a most important educational task requiring skillful personnel, yet to provide any economy this work must be assigned to an instructor of little experience or to an assistant. On the other hand the superiority of small classes at Ohio State may be traced to the provision of superior instructors for these elementary courses. Increasing class size so as to increase the number of students per instructor is an economy which seems on the basis of our admittedly preliminary experiments to be followed by lowered student achievement. Close personal contact between the student and an experienced instructor is an essential to high educational attainment.

* * *

EVALUATIONS OF OUR WORK

It is eminently desirable that every university endeavor be submitted every so often to critical appraisals upon the part of disinterested individuals. We believe that in the not too distant future the work of the junior deans should be studied critically by a committee of the faculty appointed by the President. Pending the appointment of such a committee, however, we should like to submit two or three considerations which may be suggestive.

The following table lists the percentage of delinquent students in the University for all years since 1925-26.

PERCENTAGE OF STUDENTS DELINQUENT^a IN THEIR WORK^b

	Autumn Quarter	Winter Quarter	Spring Quarter
1925-26.....	26	26	24
1926-27.....	27	20	20
1927-28.....	26	23	20
1928-29.....	30 ^c	22	18
1929-30.....	22 ^d	20	17
1930-31.....	19	20	16
1931-32.....	19	17	14

^a Delinquency is defined as the receipt of an "E" (Failure) or "Inc." (Incomplete).

^b Data taken from quarterly reports of the Registrar to the University Faculty.

^c Severe influenza epidemic just at close of Autumn Quarter, 1928.

^d Method changed in reporting grades in the Graduate School. The grade "Prog." (Progress) was substituted for "Inc." (Incomplete).

The steady decline in delinquencies during the past four years may be due to a number of reasons. In recent years the supervisory program has noticeably expanded. Since his inauguration the President has on many occa-

sions urged upon the faculty the desirability of further personalization of their relationships with students. Since 1929 we have been in the throes of a depression which has made students more serious of purpose and has noticeably influenced their work for the better. Any one or all of these factors might explain the drop in the number of delinquencies. We believe, however, that toward this general improvement the junior deans have made a significant contribution.

The Junior Dean of the Arts College has made a comparative study of the achievement of freshmen in the year 1930-31 contrasted to the achievement of freshmen in the year 1925-26. His findings are summarized below:

Point Hour Ratio	Percentage 1930-31	Percentage 1925-26
0-1.0.....	11	16
1.0-1.5.....	13	18
1.5-2.0.....	18	23
2.0-3.0.....	40	32
3.0-4.0.....	18	11

Using the 2.0 ratio as a median, 57 per cent of 1925-26 groups were below the median standard. Of the 1930-31 group only 42 per cent were below this ratio, a difference of 15 per cent. Likewise the groups above the 2.0 ratio were 43 for 1925-26 and 58 for 1930-31, a commensurate difference of 15 per cent.

During the year 1930-31 the Junior Dean of the College of Education proposed to Dean George F. Arps that a committee of the faculty be appointed to evaluate the work of his office. That committee under the chairmanship of Professor S. L. Pressey studied the activities of the junior dean in that college and submitted a report which is now on file and which may be of use in the event that a study of the entire junior dean program is made by the University Faculty. The report most cordially approved the program of this one junior dean. It proposed several developments which have been impracticable because of financial limitations, but in general it heartily endorsed the program as at that time in force.

In addition to these general considerations we have at various times made several minor evaluatory studies which would very likely be of assistance to a faculty committee should one be appointed to survey the work. These include the following:

1. A Study of the Survey of Education: Earlier in this report we have referred to the freshman survey courses taught in several of the colleges. Dean Morrill during the fall of 1931 requested a member of the staff of the Bureau of Educational Research to investigate the effectiveness of that course. This investigation was made, and the report of it is on file for future use. The results obtained have already been of considerable value to the Junior Dean of the College of Education in improving the course.
2. Mid-Quarter Grades: Since 1927 the Registrar has set up machinery making it possible for freshmen to secure mid-quarter grades during the Fall Quarter of each year. We have found this an excellent counseling device in helping students doing poor work to bring their performance up to acceptable standards. We have also been interested in discovering whether or not the scheme actually assisted students to more successful achievement. We have, therefore, made three studies: one in the College of Commerce, and two in the College of Engineering. The results of these investigations are also available for examination. In general they indicate that the stu-

dents who gain most are those in the middle sector, that is to say, students making C's at mid-quarter are in many cases assisted to B grades at the end of the quarter.

3. Investigations of the Utility of Small Classes: We have already reported two researches that have been conducted to discover the effectiveness of classes of varying size.
4. Interview Sections: We have also conducted several studies on the effectiveness of interview sections, the results of which are referred to in earlier sections of this report.

In addition to these quantitative investigations, we also have in our files considerable qualitative data. Since we are working in personal relationships, it is difficult if not impossible to reduce all data to numerical form. The scores of not hundreds of letters from parents that have come over our desks are of this type. So also are the testimonies of students who come back to express appreciation for the assistance given them. These intangible factors are important, however, and constitute a significant array of data.

RECOMMENDATIONS FOR THE FUTURE

We should like to submit three proposals for the development of the junior area program in the immediate future. The first of these has to do with the coordination of the student personnel activities of the University, the second with coordination of junior area instruction, and the third with differential instruction for freshmen and sophomores.

I. STUDENT PERSONNEL COORDINATION

During the past decade the University has transferred a considerable part of its present student personnel activities from the instructional staff to special personnel agencies. Until rather recently we had no University Examiner, no Dean of Men, no Student Medical Service, no junior deans. These offices have been created as their need became apparent. They are now operating as important administrative units performing services the utility of which will be agreed upon by almost everyone.

It should be observed, however, that these student personnel agencies have been created separately. Each is an independent unit. No machinery of coordination has ever been provided. This means that although all work toward a common end, all work with but meager information about the activities and problems of other units. It also means that occasionally there arise conflicts of jurisdiction and now and again unnecessary overlapping. Because of these considerations, President Rightmire in the spring of 1930 appointed a group of faculty members and personnel officers to canvass the situation and to make recommendations about how best to synchronize the various student personnel services of the University. He also requested this group to study the development plans of the separate personnel agencies and to gather them together into an integrated program.

Following the President's commission the group met and organized a steering committee and a dozen sub-committees. These committees each studied different divisions of University student personnel service and submitted reports which were presented to the President in June, 1931, together with a collective report for the entire group. Since no action has yet been taken upon these recommendations, we should like at this time to review the suggested program.

The proposal submitted was built upon our present organizational structure. It suggested an extension of our present practices rather than the adoption of any new principles. Historically the University has followed the policy of supporting administrative units with advisory boards to formulate policies and to appraise the effectiveness of the work being done. This same theory underlies the plan of coordination submitted. Since existing University boards, councils, and committees concern themselves with separate units of student personnel service, the committee proposed that a council be established to coordinate all student personnel work. The plan evolved about the principle of federation rather than of centralization. In the judgment of the committee our present personnel administrative units are operating effectively within the fields allotted them, but they are seriously handicapped because of their isolation one from another. The proposal provided for closer relationships between all University officers working with students outside the scope of formal instruction. Under the recommended plan each unit would continue much as at present, but each would also be associated with a central council whose chief function would be to organize and administer a unified student personnel program for the University.

We should like to urge further consideration of this plan of student personnel coordination. It is indeed unfortunate that the Dean of Men, the Dean of Women, the University Examiner, the Director of the Student Medical Service, the college secretaries the Director of Ohio Union, the Secretary of the University Intelligence Tests Committee, the junior deans, and all other university officers interested in the problems of students outside of their formal class work, should not be working more closely together than they are at the present time. All of these officers desire closer working arrangements and better mutual understandings. The machinery to make this possible, however, does not exist, and we submit that the plan proposed by President Rightmire's committee or some other more effective plan should in the near future be adopted.

II. COORDINATION OF THE SUPERVISION OF JUNIOR AREA INSTRUCTION

We believe that there exists a similar need for coordinating the supervision of the Junior Area instruction. Under present arrangements department heads, supervisors, and the junior deans are all responsible for the development of improved instructional practices in the freshman and sophomore years. Much of importance has developed under this present plan of organization, but we feel the need of achieving a greater degree of coordination should be seriously studied.

We have in this connection no particular plan to propose. We have, however, a conviction that the present divided responsibility between department heads, supervisors, and junior deans inadequately provides for as rapid instructional development as we ought to expect. It may be that department heads, supervisors, and junior deans should constitute a council on the improvement of junior area instruction. It may be that a steering committee of this large group could successfully stimulate necessary development. It may be that there should be a standing committee of the faculty on the problem. There may, moreover, be other plans that have not come to our attention. We are certain, however, that some plan should be evolved which will accelerate the improvement of University instruction especially for underclassmen.

III. DIFFERENTIATED INSTRUCTION FOR FRESHMEN AND SOPHOMORES

In its report to the faculty dated May 31, 1927, the Central Committee on the Freshman Problem stated the need of differential instruction in the following paragraphs:

Social conditions in America now make it possible for practically everyone to obtain education up to the limit of his mental ability. Our educational institutions are already crowded, and increasingly larger numbers are availing themselves of this opportunity every year. As a result of the most complex civilization which the world has ever known, *the demands for diversified types of training are increasing quite as rapidly as student numbers.*

The traditional machinery for higher education, evolved originally to care for the scholarly-minded and the "gentlemanly professions," no longer serves to meet the demands for diversified training. Especially does it fall short of serving the needs of that increasingly large group who are unqualified by interest or aptitude to profit by a highly specialized type of education in any line of work.

Thus far our attempt to meet these demands for higher education for the masses by the use of traditional educational methods has resulted in a very mixed and unsatisfactory program involving numerous educational makeshifts. Our present plan, for a large number of students, too often appears to lead nowhere except to one or more years spent in college.

At the suggestion of the Central Committee on the Freshman Problem the University Faculty gave attention to the desirability of establishing a junior college at Ohio State University. The plan was considered by the college faculties, but after considerable study it was abandoned. The need for differential instruction as stated by the Central Committee, however, still exists. We of the Junior Council believe that the time is now ripe for a further discussion of differential instruction. Students who come to us from the high schools of the State have many types of abilities. A great many of them are not able to do successful work in the traditional curriculums. This fact, however, should not exclude them from university study if by the exercise of our ingenuity and intelligence we can devise programs for engaging their interests and energies.

The same problem we face here at Ohio State University is being faced by every state university in the country. Most of us are required by law to accept all graduates of first-grade high schools. We may follow the orthodox practice of failing out students who cannot adapt themselves to our study programs, or we may recognize the social desirability of remodeling portions of our offerings in order to provide for the students who come to us natively unequipped to succeed in the standard moulds. We might well give considerable study to the development in this field at the University of Minnesota under the discerning leadership of Dean J. B. Johnston. The problem at that institution is similar to our problem. Dean Johnston and his associates first evolved a scheme of differential instruction which worked with considerable success. More recently they have amended their program and now provide a special college for the following classes of students:

1. Those who desire to pursue courses or curriculums not offered in other colleges.
2. Those who, for financial or other reasons, have only a limited time to give to college training.
3. Those who need and wish general orientation in the choice of, and general preparation for, a vocation. Many students are not aware of the variety of vocations which may fit their desires, interests, and abilities until they

have surveyed such fields of activity as will be dealt with in the courses planned for the college. Moreover, general training is usually profitable as preparation for a specific vocation.

4. Those who do not satisfactorily meet the entrance requirements of the other colleges of the University because of lack of training in specific subjects.
5. Those who transfer from other institutions who do not meet the standards for advanced standing of the college to which they apply.
6. Those who are transferred by mutual agreement from the college of the University in which they propose to register or are registered.
7. Those who might not be accepted by existing colleges because of a lack of preparation to pursue their curriculums.

This plan being evolved at the University of Minnesota and beginning to operate in the fall of this year may or may not be applicable to our situation here at Ohio State University. We are of the opinion, however, that it deserves considerable study along with other plans evolved elsewhere during the past few years.

CONCLUSION

In concluding this report we should like to submit one major generalization. It is this: our work has just begun. In four years we have hardly more than tabulated the many considerations involved. The educational counseling program of the University is as yet by no means adequate, nor the vocational counseling program, nor the personal counseling program. We have, moreover, just begun systematically to cultivate our relationships with parents and with secondary schools. Especially in the latter have we made but meager beginnings. In the next few years, we have much of importance on this score to undertake and achieve.

Similarly in the field of the improvement and coordination of instruction, the University must carry on to continued achievement. Our placement procedures are in need of considerable more development. The interview sections must be expanded much more widely. The remedial instruction of the University is at the present time by no means adequate, nor the work with gifted students, nor the testing program, nor the freshman surveys, nor the experiments with class size, course objectives, and improved curriculums. These enterprises require the constant and vigilant efforts of many individuals and groups. With and among these the junior deans may continuously be counted upon.

* * *

Respectfully submitted,

J. H. DUPRE
J. L. MORRILL
H. W. NISONGER
C. W. REEDER
W. D. TURNBULL
W. W. CHARTERS
W. H. COWLEY

UNIVERSITY LIBRARY

The libraries have reflected in their growth and activities the general situation of all divisions of the University in a biennial period of greatly reduced appropriations. While it was doubtless unavoidable that with the necessary reduction in funds appropriated for maintenance, the amount available for books, periodicals, binding, and to a lesser extent part-time service, should be considerably reduced, it has been a matter of regret to all friends of the Library that such drastic cuts were necessary.

A comparative statement of amounts available for specified purposes may be of interest.

	Jan.-Dec. 1929-30	Jan.-Dec. 1931-32
For books and periodicals.....	\$100,000	\$ 40,000
For binding	23,500	13,750

Student-service funds were reduced approximately \$5,000 for the year 1932 from the amount available for 1931.

The 60 per cent reduction in the appropriation for books was a very severe blow. When it is realized that the annual cost of maintaining our periodical and continuation sets is \$29,500 without the purchase of a single individual book for any department, the serious aspects of such a reduction are apparent, particularly so when the amount of the reduction was not announced until the first five months of the biennium had passed. Steps to meet the emergency were immediately taken. Departments were notified that no books could be purchased except from endowment fund income and from rotary or laboratory supply funds, outstanding orders were cancelled, and proposals made to assure the continuance of the important files of journals and continuation reports.

The student body made a voluntary contribution of \$1 per student for the Winter Quarter, 1932, and the \$8,900 received from this source was, by vote of the Library Council, applied to the payment of invoices for these publications. A statement was made to the Board of Control of the serious embarrassment of the Library, and an additional grant of \$8,000 was made for the payment of accumulated bills. It is hoped that additional money may be found to enable the Library to finish the year with our periodical files intact.

With book purchases almost entirely cut off since June 1, 1931, the growth of the libraries was necessarily checked in this particular field. Fortunately other sources of acquisitions of material have continued to contribute to our holdings. The reports of the Accession Department show the comparative growth of the libraries.

1930-31		1931-32
10,524	Volumes purchased	3,643
3,518	Gifts	7,335
849	Laboratory supply funds.....	369
3,944	Bound periodicals	3,821
1,468	Theses and volumes received on exchange.....	404
25,894	Unbound material, pamphlets, reports, circulars, monographs, state and municipal documents....	25,228

Attention should be called to the fact that the additions of the 3,643 volumes by purchase was made possible only from income from the eleven

endowment funds established by friends of the University for the purchase of books in certain fields. The existence and development of such funds is the only protection of the libraries against the uncertainties of legislative action. The funds and their income per year are as follows:

Fund	Estab.	Amount	Yearly Interest	Field
Frederick C. Clark.....	1908	\$ 2,000	\$ 120.00	Economics
Alfred D. Cole Memorial....	1929	11,704	699.81	Physics
Nathaniel R. Coleman.....	1913, 1928	2,550	153.02	Medicine
Edward Orton Memorial....	1932	10,000	.....	Geology
Joseph H. Outhwaite.....	1908	2,000	120.00	Amer. History
Frank E. Pomerene.....	1921	5,000	300.00	Amer. History Amer. Gov't.
Charles Cutler Sharp.....	1922	17,000	1,020.00	Chemistry
Siebert Fund	1898, 1913	1,075	64.52	German
Frank A. Vanderlip.....	1918	1,500	90.00	Education
Vandewater Poetry fund....	1921	500	30.00	Poetry
Robert F. Wolfe.....	1918	550	33.00	Journalism
		<u>\$53,789</u>	<u>\$2,630.35</u>	

Gifts to the University have helped to keep the total acquisitions for the year within sight of previous years' additions.

	Volumes	Pamphlets
Ninety-one members of our faculty contributed.....	586	227
Students of 41 classes in various departments.....	584	
(These represent texts used in assigned readings)		
From various bureaus and offices we received.....	33	46
From publishers	39	8
From institutions and societies.....	828	2,522
From individual donors.....	1,392	704
* * *		

DEPARTMENTAL LIBRARIES

Like the public-service departments of the Main Library, the departmental libraries know nothing about the depression except as new accessions of books and journals are concerned. Their growth in volumes is steady and the demands for more skilled service, increased hours of opening, and larger book collections is constant. Miss Wilhelmi reports the following table of volumes in the departmental library collections:

Botany and Zoology.....	9,682 bound volumes. Does not include unbound pamphlets, bulletins, reprints, etc.
Brown Hall (Architecture).....	4,012 bound volumes and pamphlets.
Chemistry.....	7,252 bound volumes and pamphlets.
Commerce.....	12,014 bound volumes. Does not include unbound material, trade journals and newspapers.
Education (and Psychology).....	15,000 bound volumes. Does not include unbound pamphlets, reports, bulletins, etc.
Law.....	36,857 bound volumes and pamphlets.
Lord Hall (Mining, Ceramics, and Metallurgy).....	4,005 bound volumes and pamphlets.
Medicine.....	7,974 bound volumes
Orton (Geology and Geography)...	12,951 bound volumes. Maps and pamphlets not included.
Pharmacy.....	3,421 bound volumes.
Physics and Mathematics.....	7,026 bound volumes and pamphlets.
Political Science.....	1,218 bound volumes. Does not include pamphlet material.
Veterinary Medicine.....	1,937 bound volumes.

In other words about 31 per cent of the library collections is housed outside the Main Library in 14 widely scattered collections. Under these conditions the administration of the libraries and their relation to the Main Library collections becomes a matter of vital importance. In her detailed report of the activities of these libraries during the past two years, Miss Wilhelmi calls attention repeatedly to the difficulties of providing adequate space for books and readers in rooms not planned originally for library purposes. In some cases the floors will not permit any additions to the present stack capacity (Botany and Zoology and Veterinary Medicine). In Medicine and Commerce, although the libraries occupy rooms originally planned for them, the space has been entirely outgrown. In Medicine not more than one-third of the medical collections can be shelved in Hamilton Hall, the remainder being in the Main Library and in numerous office collections.

The use of the Commerce Library has grown steadily since its establishment in 1925. Space for readers is the primary need, for owing to its location on the east side of the campus many students who have recitations in Commerce and adjoining buildings use this library as a study center. The following tables are of interest as a means of visualizing the problem:

	1929/30	1930/31	1931/32
Attendance	112,889	127,258	141,400
Circulation (Home Use)	9,112	7,709	10,983
Total Circulation (Home and Room use)	54,701	76,484	91,865

With no immediate prospect of relief by the utilization of other space in the building for library purposes, it remains to transfer certain books to the Main Library, where reading rooms are already overcrowded, in an effort to relieve the pressure in this library.

In the Education Library space for book expansion has been entirely absorbed, and in the Summer Quarter when the enrollment in the College of Education is at its maximum, it is necessary to divide the material used between the Main Library and the Education Library as the only workable compromise, since neither library can provide sufficient space for all needed materials. The same situation as to space will shortly confront us in Orton and in Pharmacy. It is highly important that in future planning for library service on this campus, group libraries of related subjects be established rather than small semi-independent collections, and that in such planning thought be given to providing adequate space for readers and for books in anticipation of future needs and inevitable growth.

PROBLEM OF EXTRA-LIBRARY FACILITIES

In addition to the fourteen organized departmental libraries there are thirty-two smaller office collections where deposits of from ten to fifteen hundred volumes are shelved for the convenience of various faculty members. A check of these collections made this year showed a very considerable number of volumes to be missing. This policy of office collections has some excellent features from the viewpoint of the faculty member in whose office they may be located. Such books are, however, very difficult to procure for service when requests are made at the Library for them. Office hours are short and irregular, records of loans to other members of the department are frequently imperfect or non-existent, and losses are bound to be heavy. Such office collections should be restricted to office manuals and books of reference and titles should in most cases be duplicated in the Main Library collections.

It is a matter of interest to note that when budgetary reductions in July, 1931, made it necessary to curtail service, the Library was asked to institute certain reductions in service schedules. From a normal schedule of 417 hours per week of student service in the departmental libraries, cuts were made totaling 239 hours per week, closing the libraries during the noon hour, from five to seven, and on Friday evenings and Saturday afternoons. So much interference was caused by these variations from schedule that the Library Council agreed to utilize unexpended balances and funds originally appropriated for other service, so that library hours might be restored to more normal conditions with the Autumn Quarter, 1931. It may be of interest to know that of a student payroll of \$2,200 per month, some \$630 representing 1,800 hours of student service is spent in maintaining our departmental library service. Time and space do not permit of reference to the activities of each of the fourteen departmental libraries. A routine schedule of duties has been worked out for each library. Each librarian in charge is called upon to render many varied and special services to students and faculty and some excellent work is being done quietly and efficiently to the great satisfaction of those who have occasion to use these smaller specialized collections.

* * *

Sunday afternoon service seems to have proven its desirability through the year's attendance. The Library has been open for 26 Sunday afternoons during the Autumn, Winter, and Spring Quarters, 1931-32. Total attendance was recorded as 23,560 with an average attendance of 906. Recorded book use was reported as 11,894 volumes with an average use of 457 volumes. No record could be kept of the use of books on open shelves or by people working in the stacks and seminars. The Law Library is the only one of our departmental libraries open on Sunday, but I anticipate pressure for the opening of other departmental collections during the coming year.

The service of the libraries has been conducted this year under handicaps and conditions unknown in its previous history. Difficulties and problems of making the best of what we had, adapting service to needs so far as resources have made it possible, have taxed the resourcefulness of the staff to a marked degree. In spite of many troubles, the morale of the staff has been excellent, and necessary adjustments have been complied with cheerfully.

To our faculty and student body we are indebted for a sympathetic understanding of our situation and a cheerful acceptance of conditions with a minimum of complaint. To members of the library staff, to our general public, and to administrative officials, the Librarian is glad to render acknowledgment of many courtesies and loyal support.

EARL N. MANCHESTER, *Librarian.*

NEWS BUREAU

The depression has served to emphasize more than ever the need for a proper and adequate understanding of the work and services of the University on the part of the public. While the University rightly enjoys a large degree of public confidence, its policy of keeping its activities and accomplishments before the public bears a direct relationship to public interest and support.

To this end the News Bureau has devoted itself during the year 1931-32. In this program it has enjoyed gratifying cooperation from the faculty and from administrative officers and has had the sympathetic support of the administration itself. In particular, the offices of the President, the Registrar, and the Secretary of the Board of Trustees have been most helpful as sources of information.

TABLE OF RELEASES

DISTRIBUTION OF STORIES FOR YEAR JULY, 1931-JUNE 30, 1932

Agriculture	202
Alumni	28
Arts and Sciences	27
Commerce and Administration	7
Commerce Extension	23
Bureau of Business Research	88
Debating	5
Dentistry	3
Education	40
Educational Conference	126
Educational Research	20
Engineering	54
Engineering Experiment Station	28
Enrollment	1,060
Commencement	640
Faculty	72
Freshman Week	10
Graduate School	3
Journalism	8
Medicine	14
Military	358
Music	11
Scholarships and Honors	195
Student Organizations and Activities	248
Radio	130 ^a
Trustees	15
Veterinary Medicine	3
Miscellaneous	121
Athletics	286 ^b
TOTAL.....	3,825

^a Including weekly programs.

^b From Athletic Department.

The University Publicity Council has continued to serve a most useful purpose, both as individual channels of information and in an advisory capacity. This has been supplemented during the year by the formation of the special committee on University relations, followed by the appointment of

Mr. J. L. Morrill as vice president of the University, with whom the News Bureau will now work in an even closer way than it has heretofore.

The Bureau has continued to function mainly as in previous years through the daily and weekly press of Ohio. The accompanying table of releases issued through the Bureau during the year gives an idea of the variety of material handled. The large number of clippings regularly received proves the wide newspaper use these releases receive. The number of releases is somewhat smaller than a year ago, mainly in the field of personal items about individual students outside of Ohio.

During the coming year the News Bureau faces more responsibility and a larger opportunity than it has ever had. Plans are under way to meet this responsibility more intelligently and more effectively than before.

JAMES E. POLLARD, *Director.*

DEPARTMENT OF PHYSICAL EDUCATION

I have the honor to transmit to you the Annual Report of the Department of Physical Education for the year ending June 30, 1932. The report comprises in varying degrees the following:

I. Required Physical Education

1. Men

- a. Activities—2 hours per week for Freshman year
- b. Hygiene course—1 hour per week one quarter

2. Women

- a. Activities—2 hours per week for Freshman year; 3 hours per week for Sophomore year
- b. Hygiene course—1 hour per week one quarter freshman

II. Intramural Program—Voluntary Recreation

a. Men

b. Women

III. Major Course—Teacher Training Four-Year Curriculum

a. Men

b. Women

c. Graduate Work for Advance Degrees

IV. Intercollegiate Athletic Program—Men

Society demands that our educational institutions provide training and leadership to the end that the lives of our youth be made more efficient. Education and development are synonymous and go on only as the result of activity. The quality of development must be judged by society in terms of powers and capacities for full and complete living. A sound and rational mind must have a clean and healthy body as its home or all soon fail. Reasonable health habits must be strongly established.

In this scientific era, the machine age, this highly complex modern life, there is greater need than ever in the world's history for the establishment of health habits, for the development and care of a sound, healthy body, for the ability to make worthy use of leisure time; and for this preparation for complete living, Physical Education programs have a definite and fundamental part to play that bulks as the equal, at least, in value and importance to the mental development—the training in the arts and sciences—as the other part of an educational program.

It is the purpose and object, therefore, of our Physical Education program at the Ohio State University, in all its phases, to make every possible contribution to the health and physical well-being of every student. The development, by activity, of the mental and physical must go on coordinately with intelligent and sympathetic direction.

I believe that, in a fuller measure than ever before, the Physical Education staff of our University is providing a sound, intelligent, and more adequate training for our young men and women. With the completion during the past year of our Men's Gymnasium and Natatorium, we are provided, for the first

time in the University History, with a physical plant adequate to give proper recreation to our student body and facilities for training teachers who may serve the Public Schools of our State as leaders in Health and Physical Education.

With this constant urge to reduce the cost of government, to lessen tax rates, to reduce consequently the cost of public education, I make the assertion that this government of ours and those administrations of our educational programs may not wisely reduce to any material degree the time and money spent for health and physical education in our program of public education. Rather there had better be reasonable increase in facilities and leaders to look well to the health and well-being of our boys and girls, our young men and young women.

There is much detail material submitted herewith, prepared by those in charge of various phases of the physical education work. Many economies and much curtailment have already been effected in several cases to the serious detriment of the work. It is to be hoped that a full schedule of work in both the Men's and Women's Divisions may be resumed at an early date.

NEW FACILITIES AID PROGRAM

In the field of required work, these comments are deemed pertinent. New facilities for the men—notably the pools and handball courts—have given great impetus to more individual work. The considerable group of men who must be confined to a restricted exercise program are better cared for than ever before. Smaller groups or classes create the need for more instruction and class leaders, whereas our reduced budget has reduced our staff—a serious handicap to the University program.

The Women's Division presents some very interesting and worth-while figures showing the trend in interest, at least, among the women. The need is clearly for more activity of an individual character with the attendant carry-over value for later life and less of interest in team games. The work done by our Women's Division is second to none in the country, both in the required work and the teacher-training program.

The development of our Intramural program for voluntary recreation is without a superior in any University. This is especially true for the Men's Division, where the new facilities have given a new impetus to the work, making it far more pleasurable to the student, and, consequently, more valuable. The Women's Intramural work has been forced to undergo some restriction owing to decreased budget—a very regrettable fact.

DEVELOPMENT OF GRADUATE WORK

Our Major Course work, involving nearly three hundred students for the year, is in a healthy condition. The development of graduate courses and the offering of work leading to advanced degrees is a notable step forward in our physical and health education program. This University is strategically located and well equipped to offer such training. Students who heretofore, at heavy expense, have had to go to Columbia University for advance degree work, are now able to secure this training here at home.

In the Summer Quarter of the current year, there were 91 graduate students (men and women). There were 193 in gross enrollment of graduate courses. There were 51 enrolled for the M.A. degree in Physical Education. In this group there were students having baccalaureate degrees from 39 different colleges or universities, 22 different Ohio colleges being represented.

The Intercollegiate Sports program still continues to be the target for much unjustifiable criticism. Carping critics find ready sale for articles attacking athletics and being mercenary will probably continue to distort facts and pick at minor flaws so long as they have a market for writings in such vein.

The champion of the many real and splendid values in intercollegiate athletics, having nothing sensational or startling to offer and not being given to exaggeration and distortion, gets scant hearing. Nevertheless, intercollegiate sport programs continue to prosper and hold the interest of students. Candidates for teams continue to report in greater numbers than funds and facilities are able to provide for. Intercollegiate athletics are better regulated and controlled today than ever before in the history of college sport, and these sports programs still continue to make worth-while contributions to the general morale of the institutions, as well as to provide notable benefits, mental and physical, to the actual participants.

* * *

L. W. ST. JOHN,
Professor, Physical Education.

STUDENT MEDICAL SERVICE

GENERAL REMARKS

1. The activities of the service have steadily increased, since reorganization in 1928 by 13 per cent.
2. The majority of admissions have continued to be due to acute respiratory diseases.
3. The general health of the student body has been excellent.
4. No important or extensive admissions (epidemics) of communicable disease has occurred.

DISPENSARY SERVICE HAS COVERED THE FOLLOWING ACTIVITIES

1. Clinical Service.
2. Reference of patients to specialists.
3. Health and Special Examinations.
4. Instruction in Personal Hygiene—Given concurrently with treatment.
5. Sanitary Service.

EMERGENCY SERVICE

Has been promptly rendered both on the Campus and by City Ambulances.

HOSPITALIZATION

The Starling-Loving Hospital has functioned satisfactorily in every way.

SPECIAL INDIVIDUAL INVESTIGATION BY STAFF

This activity has been restricted this year owing to increase of routine work.

SANITARY SERVICE

A limited sanitary service has been continued—ventilation, heating, water supply, and food handlers.

PERSONNEL

1. There has been a shortage of personnel for clinical work, obviated in Spring Quarter by the temporary employment of Doctor Hall (part time), but this arrangement proved unsatisfactory. No other change in personnel occurred during the year.
2. The necessity of additional personnel has been presented during the year.
3. There has been a constant shortage of medical personnel throughout the year. This has resulted in long waits for the student patients, particularly at certain hours of the day. Many students have been observed to leave without treatment.

A too great strain is placed on the physicians of the clinic, in an endeavor to serve the students during the "rush periods," viz. mid-morning and afternoon.

To remedy this, Doctors Wilce and Beer were transferred from their regular and important duties, viz., Sanitary, Food Handlers, Laboratory, Spe-

cial, Annual, and Vocational examinations to help in the clinical work. This was the best that could be done, but was very unsatisfactory.

In order to bring our service up to approximately that of other Universities of equal size and importance, the following activities are recommended:

Psychiatric Service.—This service is now in hands of the Department of Psychology, pending the installation of a full-time Psychiatrist.

Corrective Service.—This service is now in hands of the Department of Physical Education, pending installation of a full-time Orthopedist.

Dental Service.—A dental survey with corrective advice for each patient is anticipated, requiring the services of one part-time Dental Surgeon.

Dietetic and Nutrition Service.—For the correction of many cases of malnutrition. Consideration is being given to the plan of establishing this service as a special clinical section with a competent Dietitian.

Ophthalmology.—There have been very many cases of uncorrected visual defects. Clinical relief of these cases will require, in the near future, services of an Ophthalmologist for diagnosis, emergency treatment, and reference.

Laboratory Service.—This service is extensive, for immunization especially; it is becoming unequal to the requirements. The additional services of a competent Laboratory Technician are desired.

Clinical Service.—Additional physicians (2) are to be obtained, as the clinical service increases its activities.

Periodic Examinations.—This service is rapidly becoming greater than the present personnel can dispose of and will soon require the services of two additional physicians.

* * *

JAMES S. WILSON, M.D., *Director*

STUDENT SENATE

This, the fifth annual Student Senate Report brings to a close the fifth year of existence for the Student Senate. In its fifth year the Student Senate has taken tremendous strides forward, and I take sincere satisfaction in presenting a brief summary of its accomplishments.

This record has been made possible only by the diligent efforts and willing cooperation of everyone concerned. At this time I wish to thank all the members of the Senate for their enthusiastic and untiring support of this program. I cannot compliment or praise too highly the work of my assistant and freshman secretaries. Their loyal support has been most stimulating and to them rightfully belongs the credit for so many administrative and service functions well done. The willing support of our program by the University Administration and officials has been greatly appreciated.

That you may better judge the work accomplished this year I shall divide it into two divisions; namely, the legislative work and the administrative and service functions.

THE LEGISLATIVE WORK

One of the first functions of the Senate in legislative importance was the investigation of, and additions made to, the code procedure of the Student Court. As there was no method for the removal of an incompetent Justice or Prosecutor, the Senate enacted an amendment to the Constitution making it possible for the Senate to impeach either, upon the six-sevenths vote of the court. During the year two vacancies upon the court were occasioned by resignation, and one prosecutor was impeached; the three offices were filled by regular election.

Women's Ohio, formerly an independent women's prospect group, was made a standing committee of the Student Senate. As such it becomes a definite part of the Senate, and its financial needs will be arranged through the annual budget of the Senate. The membership includes all of the women members of the Senate, plus as many additional members as the President, on the recommendation of the chairman of the committee, may see fit to appoint.

The Block "O" cheering section was a decided success, and a definite organization was established. There will be a Senior Head Manager, four Junior managers, and ten Sophomore managers. The section will embrace sections 13 and 15 next year. Definite steps were made this year to establish councils in all of the colleges, and our efforts were quite successful. New councils were established in the colleges of Pharmacy, Education, Medicine, Dentistry, and Commerce. These groups were subsidized to some extent to get them started, and all of them appear to be on their way to a successful functioning. Election by-laws were changed to allow each college council to select the Student Senator from that college in the manner it deemed best.

The by-law governing absences from Senate meetings was made to include absences from committee meetings as well. This was deemed advisable since so much of the work of the Senate is done by committees. More care has been taken in the selection of committeemen and better work has been the result. Six seats on the Senate were declared vacant through resignation and unex-

cused absence. Four seats were filled by vote of the Senate, one by the recent election, and the other, that of Sphinx, is still vacant.

By changes and additions to the by-laws, the Senate now fills all the vacancies occurring in the ranks of class officers. All Student Senate elections demand that the winning candidate must poll a majority of the votes cast.

ADMINISTRATIVE AND SERVICE FUNCTIONS

This year, like each one preceding it, has seen many additions to the administrative and service functions performed by the Senate. I shall attempt a summary of the more important ones in their chronological order.

The first project upon which the Student Senate worked this year was Freshman Camp, of which the Senate was co-sponsor with the University Y.M.C.A. Our retiring President, W. Milfred Batten, was the camp director. The camp was held for three days preceding Freshman Week at Camp Willson on Lake Macachee, a few miles from Bellefontaine, Ohio. The purpose of the camp is to gather together approximately one hundred of the outstanding freshman men from both Ohio and neighboring states, and give them an opportunity to get acquainted with each other and with the outstanding students and faculty leaders of the campus, as well as with the problems they will encounter at Ohio State. The camp was attended by some ninety freshmen last year, and was entirely self-supporting. It is hoped that the Senate will be in a position to partially subsidize this project for next fall. The camp was a decided success, and plans are already under way for the coming camp session, next September 24, 25, and 26.

The Student Senate sponsored the Thursday night meeting of the Freshman Week Program, at which all activities of interest to freshman men and women were discussed. The program was quite interesting and is heartily recommended for the consideration of the 1932-33 Senate.

The annual cane rush between the Frosh and the second-year men was a colorful event, although the number of participants was somewhat discouraging. Some four thousand people saw the fun and appeared to enjoy it thoroughly. The Senate made all arrangements for the party and bore all incidental expenses, such as the purchase of the cane.

With the opening of the football season, work began in leaps and bounds. Rallies were planned and executed for all out-of-town games. The band cooperated whole-heartedly, and one very good team send-off was executed.

The Stadium and campus were decorated for all games, and individual boxes were decorated as the occasion demanded. Senate Secretaries acted as errand boys for Stadium officials and worked as assistants in the Stadium press box.

AUTUMN HOMECOMING

The great event of the Fall Quarter was Homecoming. Homecoming this year was the greatest success it has ever been in the life of the Student Senate. The election for Homecoming Queen drew a tremendous ballot. The queen and her maids were given a continual round of entertainment culminating with the Homecoming Dance, which was the initial function of its kind in the new Gymnasium. The events in order of Homecoming, which were sponsored in conjunction with the Alumni Association were: election of Queen and the entertainment of the Queen's party, publicity stunts, Homecoming Rally, Fraternity and Sorority Decorations Contest, Homecoming Dance with Emerson

Gill and the Floor Show, the Water Carnival in the New Natatorium, the Buckeye Tree Planting in memory of our football founders and heroes, the blimp rides, and the ceremonies at the Navy Game. Some two thousand six hundred people attended the dance, and the Senate's share of the net profit was \$650.

Dad's Day was another success. The Senate gave the Fathers of the football squad a most enjoyable day of entertainment. The entertainment included a noon luncheon, an evening banquet, a plane ride over the campus, a tour of the campus, the exhibition of an autogiro, and the introduction and ceremonies at the game. Appropriate decorations were arranged for and the "Hello Dads Spirit" was very much in evidence. Both successes of Homecoming and Dad's Day were so stimulating I heartily recommend that an added effort be made next year to make those occasions greater than ever.

The Senate managed all the details for the arrangements of the annual Appreciation Dinner to which the Varsity, Reserve, and Freshman teams were invited, as well as the coaching staff and other prominent people of the city and campus. The banquet was sponsored jointly by the Senate and the Athletic Association.

All the class elections were sponsored by, and were under the jurisdiction of, the Senate. This year's election was quite heated and much interest was shown. A record vote was cast.

Student Senate cooperated with Scarlet Key in the distribution of line-up sheets at all the basketball games. For the benefit of the Olympics Fund, the two organizations collected a "tin bucket" offering at the Michigan game and about \$125 was collected.

AID FOR THE LIBRARY

Realizing the dire needs of the University libraries due to great reduction in their budgets, the Senate took advantage of the opportunity to help the University and also awaken the people of the state to the great need of funds for the support of Ohio State University. Accordingly, the Senate planned and executed an election of all students on the campus at 10:00 A. M. on the question whether or not they would consent to the addition of a dollar on the Winter Quarter fee cards, for the benefit of the libraries. The vote was very much in favor of the additional fee, and some \$8,000 was collected for the cause. This project received the hearty cooperation of the entire administration; but it was a Student Senate project in its entirety.

The Student Senate Annual was printed again this year—the first issue since 1929. It has been judged the best publication of its kind ever published at the University. The five thousand copies and all incidental expenses meant an expenditure of approximately \$450. This amount may be considered well spent, since the Annual is used in all kinds of contact work with the outstanding high-school students, with visitors, and friends of the University.

Faculty Grading has been given some consideration and is now able for the first time to advance with assurance of success. The Administrative Council has agreed that grading forms shall be furnished departmental heads who will cooperate in having the test given in every classroom. The graded forms will not be tabulated by the Senate but will be retained for tabulation and consideration by the departments and instructors graded. With the organization of the new Senate, this project can and should progress rapidly.

The Committee of 88 is another project of the Senate that is rapidly taking form and should be given much consideration by the 1932-33 Senate. This

group is being formed to work in conjunction with the Alumni Association in carrying on prospect work, publicity work, and in soliciting the friendly cooperation of the people of our 88 counties in Ohio toward problems of state-supported educational institutions. Much good can come of this enterprise, and I cannot recommend too strongly its continuance.

Traditions Day is being made to include many new features this year. Not only is the Student Senate coordinating the arrangements for the annual Traditions Day events, but also is following the Circus idea as developed at Northwestern University. The task is a tremendous one; but present indications are indeed encouraging, and with the help and cooperation of the newly elected Senate we are assured of a glorious success. Some seventeen concessions are contracted for; six rides, two sideshows, a "Big Top," with divers acts, skits, sings, and other contests are planned. An ox roast, park-plan dancing, and other added attractions will supplement the usual Traditions Day.

* * *

One of the newest and best traditions at Ohio State is that of the band concerts in the Hollow. Three concerts were staged last spring through the joint cooperation of the Student Senate, the University Glee Club, and the University Band. Plans for similar concerts are now complete, and the first of the present series will be given soon.

The Senate has established a weekly radio broadcast. It has printed a weekly calendar of events for distribution on the campus; it has established a clearing house for obtaining permits to use the advertising privilege at Fifteenth Avenue and High Street; it has drawn up an identification card for University publicity solicitors who solicit down-town merchants, so that the merchant may know with whom he is dealing; the cooperation of the Columbus Better Business Bureau was very valuable to that end. The Senate contributed a piano to the use of campus organizations, and above its budgetary allowances for donations, gave \$25 to the University Religious Council and \$13 toward the settlement of a claim against the Independent Men's Council.

* * *

JAMES HANDLEY, *Secretary-Treasurer.*

YOUNG MEN'S CHRISTIAN ASSOCIATION

* * *

SUMMER PROGRAM

Room inspection.—This work was done at the request of the Dean of Men's office, which needed additional help. The number of homes inspected was 119; room inspected, 367.

Employment.—The Summer Quarter accomplishment in this line may be stated most briefly by the following statistics:

Applications by mail.....	200
Applications in person.....	299
Students placed	69
Positions (some permanent, some temporary).....	103

* * *

REGULAR SCHOOL YEAR, SEPTEMBER TO JUNE

Employment.—The situation was unusually difficult. Students desiring employment suffered because of the depression, hiring of as many married men as possible, women's campaign in the interest of securing employment for the needy, the cut in the University's appropriation for student labor, and the fact that fraternities used their own men as waiters and dishwashers. The following figures will give some idea of what we were able to do:

Applications	1,041
Students placed	394
Number of positions.....	872
Money value of work secured.....	\$17,876

Radio talks and newspaper publicity were used as means of promotion. A third means was a waiters' training school, held in cooperation with the Home Economics Department. Of the thirteen men who attended, two-thirds obtained positions.

The committee was active in the office, assisting Mr. Willits in assembling data, helping to interview applicants, and maintaining office hours while the secretaries were busy elsewhere. Eight students on an average gave two hours weekly throughout the year.

Community service.—The committee members numbered 72. Thirty-eight students served as leaders of boys' clubs; 9 worked in clothing distribution centers; 5 did detail work at Community Fund headquarters. At 4:30 P. M. on December 13, the last Sunday before examinations, a Christmas service was held in the New Gymnasium. The program consisted of music by a chorus of four hundred voices under the direction of Herbert Wall; invocation by the Reverend Walter N. James. The attendance was about sixteen hundred. Fifty-five baskets were given by fraternities and sororities; cash contributions amounted to \$60.36. A hundred and eighty-five poor boys and girls were entertained at Christmas parties and given presents by fraternities and sororities.

International.—This committee cooperated with the International Club, which meets every two weeks. A peace dinner at Denison University was attended by 16 persons from Ohio State and addressed by Mr. John Bricker, a member of our Board. Three social functions should be mentioned: one a party given by Mrs. Gaw, Dean of Women, with an attendance of 18; another party on New Year's Eve the Ohio Union and the Y.W.C.A. cooperating, with 35 in attendance; the third a picnic in the summer. A dinner was given for Mr. Charles Hurrey, Secretary of the Friendly Relations Committee of the Student Y.M.C.A., when he visited the Campus on January 18 and 19. The attendance at the dinner was 21. Twenty-one foreign students were entertained in homes during holiday recesses. A Foreign Student Speakers' Bureau arranged for addresses before various organizations—churches, high schools, etc. Nine students gave a total of 21 such addresses.

* * *

ADDITIONAL COMMENTS ON COUNCILS AND CABINET

Freshmen

Meetings every Tuesday night. Average attendance, 55

Discussions, most of them led by speakers from the faculty

Business

Planning of program

Retreats: 1. Place: Camp Indianola

Eight members in Phi Eta Sigma

Bi-weekly, Sunday meetings with Freshman Y.W.C.A. at different homes

Athletic contests with Sophomore Council: 5

Sophomore

Meetings every Tuesday night. Average attendance, 45

Discussions, most of them led by speakers from the faculty

Business

Planning of program

Subjects (Illustrative)

The College Student's need for Religion

The Church in Politics

Africa

The U. S. and the World Court

A Scientist's View of Religion

Christian Ideals in Modern Life

Retreats for purpose of advance in program and fellowship: 1

Place: Camp Indianola near Lancaster

Baskets donated to Christmas Service: 2

Athletic contests with Freshman Council and in intramurals: 11

Donated \$20 to general Y treasury in addition to paying for all supplies used in its program

Upperclass

Meetings every two weeks with speakers in most cases

Average Attendance: 10

General

Cooperative enterprises with Y.W.C.A.

Conference

Joint Setting Up Conference (proposed)
 Joint Big Ten Conference (proposed)

*Campus Fellowship**International*

Reception for Foreign Students
 Continuous program for Foreign Students
 Foreign Work Project (Finance) (Proposed)

Community Service

Christmas Service

Social

Sophomore Icebreaker
 Freshman Mixer
 Cabinet and Council parties

*Speakers**Extension**Fireside Sessions**Freshman Cabinet Forums**Church*

Go to Church Sundays

Holy Week Services

It is doubtful if any two Associations in the country are more cooperative than those of Ohio State University

* * *

GLEN D. DALTON, *Executive Secretary.*

YOUNG WOMEN'S CHRISTIAN ASSOCIATION

The activities of the Association may be classified conveniently as committee work and non-committee work.

COMMITTEES

Appreciation Hour Committee.—Through weekly meetings held during the Fall and Winter quarters and averaging some thirty students, members of the faculty and others shared with the students their interests. The enumeration of several of the subjects reveals the variety of the interests: "Adventures in Sketching," "A College Student's Philosophy of Life," and "A Chopin and Schubert Hour." Opportunity was afforded in the informal period closing the meeting for the making of contact with faculty and the forming of friendships among students on the basis of common interest.

Settlement Committee.—Working as volunteers in four of the settlement houses—Gladden, Godman Guild, South Side, and St. Paul's—as leaders of clubs or as teachers of music, dramatics, sewing, etc. Approximately one hundred students gained experience in leadership, received an introduction at least to the work of social agencies in a community, and served the community of which as students they are a part.

Community Service.—Students visited regularly the Children's Hospital, Florence Crittenden Home, Juvenile Detention Home, Home for the Aged, Old Folks Home (negro), University Hospital—providing music, stories, skits, and games and giving parties. During the Winter Quarter, under the supervision of the Urban League, a group of girls was organized at the Mound Street School. At the close of the school year, clothes were collected from the dormitories and sororities for the less fortunate in the city.

In cooperation with the Y.W.C.A. there was held in the new gym the third annual Campus Christmas service. Baskets and money estimated at \$235 were given to the settlement houses for distribution. Parties were given by several fraternity and sorority groups to children in the city.

Student Industrial Committee.—Through discussion meetings of the students, through participation in small groups in meetings of the Industrial group of women at the Central Y.W.C.A., through three social meetings—a supper at the Central Y.W.C.A., an evening at Ohio Wesleyan, and a picnic of some forty girls in May—the two groups have been slowly laying the foundation for the kind of sharing of knowledge and experience in the realm of industry which can result in more intelligent and clearer understanding of problems and the development of a desire for their solution and an exploration of the means of solving them.

Social Committee.—To introduce freshmen to the various women's organizations and especially to the opportunities the Association offers freshmen, a Freshman Tea was given. To give both men and women of the freshman class an opportunity to become acquainted and make their first week in college more pleasant, the committee cooperated with the Y.M.C.A. in the annual Freshman Mixer. A tea was held in the autumn for transfer students, and a Reception

was planned with World Fellowship Committee and Y.M.C.A. for foreign students. An All-Membership Dinner was held in January.

World Fellowship.—The purpose of the World Fellowship Committee has been to stimulate interest in international affairs and to act as "host" to the students from other countries during their residence in Columbus. Discussions led by members of the group, speakers such as Kirby Page, a current events bulletin board, a dinner meeting to which the foreign students were invited especially, were the means used to further the realization of the purpose. The intense interest of a small group in disarmament was in part responsible for the organization of the Campus Peace League formed during the Winter Quarter.

Religious Study.—Seeking a deeper and more satisfying understanding of some of the great realities so often hidden in too familiar phrases, and drawn by interest in other peoples, the committee has concerned itself with a study of some of the world's great religions. Consideration of the place of the committee in the organization revealed, and to a certain extent developed, in the executive group, or Senior Cabinet, a growing interest in the contribution of religion to the life of individuals.

Membership.—The committee's function has been to conduct the finance and membership campaign through which an attempt is made to interpret to every girl in the University through personal interview, the work of the Association and to give each the opportunity to become a member and to make a contribution to the support of the work.

Fireside Sessions.—Faculty speakers were provided for six meetings at sorority houses during the Fall and Winter quarters.

Publicity and Art Committees.—The work of the Association was described through the campus publications and the city papers. Posters were used frequently to announce meetings. An attractive bulletin board in the office fostered creation of interests, and was a source of information during the year.

Inter-Racial Committee.—The committee, whose purpose is that a full and creative life may be made possible for all men, has worked specifically to increase understandings between members of the negro and white races. By individual contact members of the committee have attempted to draw the members of the minority group into the fellowship of the Association as members of various committees. The chairman led discussions on race in groups upon invitation. The committee cooperated with the Interracial Council in a Friendship Tour to negro centers in Columbus, and in sending a group to the International Institute at Wilberforce. The committee organized a theater party of thirty students and adults for "The Green Pastures." It planned in cooperation with the Y.M.C.A. a luncheon attended by 150 people at which Richard Harrison, "de Lawd" of the Green Pastures, was the guest and speaker.

Freshman Cabinets.—The freshmen interested in the Association were organized into nine freshman cabinets each with its own officers and an upper-class adviser or "keeper." The weekly meetings of these groups consisted of discussions, talks by faculty and upperclassmen, social meetings, and settlement work.

Sophomore Council.—An organization for sophomores similar to the freshmen cabinets yet consisting of only one group met every two weeks.

ACTIVITIES OTHER THAN COMMITTEES

Chapel Services and Conferences.—As a member organization of the University Religious Council, the Y.W.C.A. cooperated in the Chapel Services at 4:30 o'clock. The speakers for the year were: Fred B. Smith, Paul Jones, Kirby Page, T. Z. Koo, William H. Boddy, Stephen S. Wise, Thomas W. Graham, and William Oxley Thompson.

Cooperating with the Council, the Y.W.C.A. helped plan and carry through the two three-day conferences which the Council sponsored, the Conference on Prohibition at which Mr. Ben H. Spence and Dr. Leigh Colvin were the speakers, and the Disarmament Conference at which Kirby Page, Henry Kittredge Norton, and T. Z. Koo were the leaders.

* * *

Vocational Guidance.—Through a series of vocational meetings, which included talks and round table conferences held in cooperation with W.S.G.A. and the Office of the Dean of Women, students were given the opportunity to acquire information concerning vocations.

Subjects and the individuals presenting the whole field follow. At each meeting four other individuals assisted in the round-table conferences.

The subjects and the speakers were: "Women as Executive Secretaries"—Miss Mary I. Atkinson; "Women in Research"—Professor Mary Louise Mark; and "Women as Managers or Owners of Business Enterprises"—Mrs. Mary Love McGuckin.

ELEANOR FRENCH, *General Secretary.*

SUMMARY OF THE FINANCIAL STATEMENT FOR THE YEAR ENDING JUNE 30, 1932

(A complete detailed Financial Report of the year ending June 30, 1932, is printed in separate form and may be had upon application.)

THE OHIO STATE UNIVERSITY OFFICE OF THE BOARD OF TRUSTEES

COLUMBUS, OHIO, JULY 6, 1932

HON. EGBERT H. MACK,
*Chairman of Board of Trustees,
The Ohio State University.*

DEAR SIR:

The financial statement presented herein is that part of the Annual Report of the Board of Trustees to the Governor of Ohio, which shows the financial condition of The Ohio State University for the fiscal year ended June 30, 1932.

CARL E. STEEB,
Secretary.

CONSOLIDATED STATEMENT BALANCE SHEET

ASSETS

CURRENT ASSETS

Cash in Bank and on hand.....	\$ 488,172.84
Deposits	454.00
State Appropriations	2,569,622.60
Inventories	294,395.67

\$ 3,352,645.11

INVESTMENT ASSETS

State Treasurer	1,148,422.04
University Treasurer	35,195.92

1,183,617.96

EDUCATIONAL PLANT

Lands	2,350,848.48
Land Improvements	1,391,379.02
Ohio Stadium	1,801,049.13
Buildings	11,100,071.65
Equipment of Departments.....	5,438,325.76

22,081,674.04

Total Assets

\$26,617,937.11

LIABILITIES

Contingent Liabilities (State Appropriations).....

\$ 2,569,622.60

Endowment Fund Liabilities

Funds for General Purposes.....	\$ 968,988.38
Funds for Special Purposes.....	196,633.66

1,165,622.04

Trust Fund Liabilities.....

17,995.92

Capital Account

22,864,696.55

Total Liabilities

\$26,617,937.11

INCOME AND EXPENDITURES

Cash Balance July 1, 1931.....		\$ 433,537.80
Total Income for year.....	\$ 7,960,077.02	
Less funds paid to State Treasurer and not available for the University	5,013.97	
Total Available Income.....	7,955,063.05	
Total Expenditures for year.....	7,900,428.01	
Balance for the year.....		54,635.04
Cash Balance June 30, 1932.....		\$ 488,172.84

INCOME

INCOME FROM STUDENTS:

Tuition and incidental fees.....	\$ 820,315.60
Special fees, degrees, etc.....	15,485.00
Gymnasium locker rent.....	9,986.00

\$ 845,786.60

INCOME FROM ENDOWMENTS:

For general purposes.....	\$ 13,045.88
For designated purposes.....	9,820.14

\$ 22,866.02

FEDERAL AID:

Land-grant Act of July 2, 1862.....	\$ 31,450.60
Land-grant—Virginia Military Lands.....	13,641.64
Additional Aid—Acts of Aug. 30, 1890, and March 4, 1907.....	50,000.00
Agricultural Extension Work—Acts of May 8, 1914, July 24 1919, and January 17, 1928.....	296,331.67

\$ 391,428.91

STATE AID:

Current Expenses.....	\$ 3,546,556.56
Capital Improvements.....	717,216.79
Agricultural Extension.....	286,522.50

\$ 4,550,295.85

GIFTS FOR CURRENT EXPENSES:

For designated purposes.....	\$ 65,490.97
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\$ 65,490.97

INCOME FROM OTHER SOURCES:

Agricultural Extension

Boys' and Girls' Club Work.....	\$ 4,826.72
County Agents' Funds from Counties.....	201,023.68
Farmers' Institutes Funds from Counties.....	15,225.00
Rotary	6,862.49

\$ 227,937.89

Departmentals Earnings

Applied Optics	\$ 6,268.75
Clinic	2,770.02
Dental Clinic	26,129.31
Dispensaries	1,926.05
Engineering Experiment Station.....	232.38
Farm Rotary	98,837.88
Lantern	9,046.30
Laundry	2,003.95
Ohio Biological Survey.....	414.10
Starling-Loving Hospital.....	137,473.63

THE OHIO STATE UNIVERSITY

University Publications	3,654.20	
Veterinary Clinic	6,166.16	
		\$ 294,472.73
For Designated Purposes		
Adult Education	\$ 100.00	
Class of 1931—Interest on Gift	1.98	
Commutation of Uniforms	31,899.28	
*Miscellaneous Sales	5,011.97	
Return of Loans	293.85	
State Board of Education (Smith-Hughes)	39,614.78	
Student Medical Service	29,470.00	
*Virginia Military Lands	2.00	
		\$ 106,393.86
DORMITORIES AND DINING HALLS:		
Home Economics Cafeteria	\$ 157.81	
Home Management House	2,480.33	
Pomerene Cafeteria	34,188.27	
Residence Halls for Women	160,609.34	
Stone Laboratory Dining Hall	3,112.60	
		\$ 200,548.35
COMMERCIAL ACCOUNTS:		
Photograph Department	\$ 13,169.30	
Telephone Account	24,185.35	
University Bookstore	84,053.90	
University Print Shop	116,525.50	
Warehouse	384,756.13	
		\$ 622,690.18
SUBSIDIARY COMMERCIAL ACCOUNTS:		
Dairy Department—Official Testing	\$ 10,500.93	
Journal of Higher Education	5,150.76	
Ohio College Association	7,640.62	
		\$ 23,292.31
ATHLETIC DEPARTMENT	\$ 608,878.35	
		\$ 608,878.35
Total Income		\$ 7,960,077.02
Less funds (*) paid to State Treasurer and not available for the University		5,013.97
Total Available Income		\$ 7,955,063.05

CLASSIFIED EXPENDITURES

EXPENSES:

Salaries	\$ 4,564,887.62
Boys' and Girls' Club Work	4,723.52
Coal and Gas	77,688.53
Employes and Extra Labor	135,220.20
Feed for Livestock	12,718.55
Field Work—Agricultural Extension	119,702.37
Food Supplies	74,225.06
Freight and Cartage	4,892.93
Incidentals	71,508.96
Laboratory and Educational Supplies	121,790.43
Materials and General Supplies	145,231.40
Printing	69,069.15
Refunds—Military Uniforms	27,856.45
Repairs to Equipment	13,314.68

Scholarships and Student Aid.....	15,914.96	
State Teachers' Retirement System.....	42,493.36	
Stationery and Office Supplies.....	65,874.40	
Telephone and Telegraph.....	30,482.69	
Travel	21,894.90	
Water	32,013.15	
Total Expenses.....		\$ 5,651,503.86
EQUIPMENT:		
Apparatus	\$ 26,812.22	
Books	39,236.63	
Collections	27.50	
Furniture and Fixtures.....	100,387.55	
Livestock	4,717.77	
Machinery, Tools, and Appliances.....	122,056.97	
Total Equipment.....		\$ 293,238.64
LANDS	\$ 8,875.57	
NEW BUILDINGS.....	382,638.98	
ADDITIONS TO BUILDINGS.....	111,266.84	
IMPROVEMENTS	16,764.11	
Total		\$ 519,545.50
DORMITORIES AND DINING HALLS:		
Home Economics Practice House.....	\$ 1,649.37	
Pomerene Cafeteria.....	35,295.70	
Residence Halls for Women	145,212.22	
Stone Laboratory Dining Hall.....	2,644.29	
Total Dormitories and Dining Hall.....		\$ 184,801.58
COMMERCIAL:		
Photograph Department.....	\$ 14,126.45	
Telephone Account.....	28,472.14	
University Bookstore.....	84,199.44	
University Print Shop.....	107,723.89	
Warehouse	383,084.99	
Total Commercial.....		\$ 617,606.91
SUBSIDIARY COMMERCIAL:		
Dairy Dept.—Official Testing.....	\$ 10,409.96	
Journal of Higher Education.....	6,639.26	
Ohio College Association	8,072.42	
Total Subsidiary Commercial.....		\$ 25,121.64
ATHLETIC DEPARTMENT		\$ 608,610.38
Total Expenditures		\$ 7,900,428.01

BALANCE SHEET, JUNE 30, 1932

ASSETS

CURRENT ASSETS:		
Cash in bank and on hand for current expenses.....	\$ 488,172.84	
Deposits	454.00	
Auditor of State, Special Appropriations.....	2,569,622.60	
Inventories	294,395.67	
INVESTMENT ASSETS:		
State Treasurer (irreducible debt of the State).....	1,148,422.04	
Ohio State University Treasurer.....	35,195.92	

EDUCATIONAL PLANT:

Lands, Buildings, and Equipment.....	22,081,674.04
Total Assets.....	\$26,617,937.11

LIABILITIES

CONTINGENT LIABILITIES:

Special State Appropriations.....	\$ 2,569,622.60
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ENDOWMENT FUNDS:

Funds for General Purposes, Invested.....	968,988.38
Funds for Special Purposes, Invested.....	196,633.66

TRUST FUNDS.....	17,995.92
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CAPITAL ACCOUNT.....	22,864,696.55
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Total Liabilities.....	\$26,617,937.11
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GIFTS FOR GENERAL AND DESIGNATED PURPOSES

The following items are turned into the State Treasury to the credit of Rotary Funds for use by the University:

<i>From Whom</i>	<i>Purpose</i>	<i>Amount</i>
Akron Alumnae Association.....	Student Loan Fund.....	\$ 70.00
Alpha Epsilon Phi.....	Student Loan Fund.....	100.00
American Face Brick Association.....	Research in Engineering.....	260.00
American Foundrymen's Association.....	Research in Engineering.....	100.00
American Society of Mechanical Engineers.....	Research in Engineering.....	690.00
American Society of Testing Materials.....	Research in Engineering.....	322.68
Bonnot Company.....	Research in Engineering.....	750.00
Calcium Chloride Publicity Committee.....	Research in Engineering.....	1,896.00
Columbus Scholarship Society.....	Student Loan Fund.....	1,200.00
Columbus Women's Club.....	Scholarship in Journalism.....	9.00
Common Brick Manufacturers' Association.....	Research in Engineering.....	255.15
Dairy and Ice Cream Mach. and Sup. Assoc.....	Fellowship in Dairy Technology.....	1,150.00
Dayton Alumnae Association.....	Student Loan Fund.....	6.00
Detroit Alumnae Association.....	Student Loan Fund.....	100.00
Detroit Community Fund.....	Research in Sociology.....	300.00
Percival Dodge.....	Scholarship in Sociology.....	100.00
Edgar Plastic Kaolin Company.....	Fellowship in Ceramic Engineering.....	675.00
E. I. duPont de Nemours Company.....	Fellowship in Engineering.....	750.00
General Education Board.....	Scholarship in Ceramic Arts.....	2,000.00
Goodyear Tire & Rubber Company.....	Gen. Exp. in Bureau of Business Res..	353.52
Graduate Students.....	Publication of Doctors' Dissertations..	11,480.00
Joseph C. Hale.....	Scholarship in Dairy Technology.....	500.00
Home Economics Nursery.....	Purchase of Equipment.....	2,026.00
Lang Company.....	Fellowship in Dept. of Chemistry.....	100.00
Various Mine Operators.....	Night Classes in Mining.....	445.00
National Electric Light Association.....	Rural Electrification Project.....	6,200.00
National Kraut Packers Association.....	Fellowship in Agriculture.....	1,000.00
National Research Council.....	Research in Chemistry.....	350.00
National Research Council.....	Research in Psychology.....	500.00
National Research Council.....	Research in Chemistry.....	500.00
Neil Hall Students.....	Student Loan Fund.....	116.05
New York Alumnae Association.....	Student Loan Fund.....	204.00
Ohio Coal Investigation.....	Research in Engineering.....	670.37
Ohio Congress of Parent Teachers.....	Incidentals—Educational Conference..	100.00
Ohio Federation of Women's Clubs.....	Latin American Scholarship.....	800.00
Ohio Paving Brick Manufacturers' Association.....	Research in Engineering.....	300.00
Payne Fund Incorporated.....	Research in College of Education.....	13,075.52

Presser Foundation.....	Scholarship in Music.....	250.00
Radio Survey Fund.....	Research in Engineering.....	350.00
Republic Steel Company.....	Research in Engineering.....	100.00
Rockefeller Foundation.....	Scholarship in Ceramic Arts.....	2,000.00
Rockwood Manufacturing Company.....	Research in Engineering.....	250.00
Senior Class 1930.....	Senior Memorial Fountain.....	27.87
Senior Class 1931.....	Memorial Entrance.....	313.77
John A. Sheffer.....	Scholarship in Ceramic Arts.....	10.00
Smith Agricultural Chemical Company.....	Fellowship in Horticulture.....	500.00
Springfield Alumnae Association.....	Student Loan Fund.....	50.00
Structural Clay Tile Association.....	Research in Engineering.....	1,250.04
Students in the University.....	Purchase of Books for Library.....	8,935.00
Timken Roller Bearing Company.....	X-Ray Research in Dept. of Chemistry	2,000.00
Total.....		<u>\$65,490.97</u>

APPENDIX I

A

SUMMARY OF ENROLLMENT BY CLASSES AND COLLEGES—YEAR 1931-32

	FRESHMAN			SOPHOMORE			JUNIOR			SENIOR			SPECIAL			IRREGULAR			TOTAL		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture	176	110	286	163	79	242	116	95	211	95	111	206	8	3	11	3	9	12	561	407	968
Applied Optics.....	14	1	15	15	....	15	24	1	25	14	1	15	....	....	....	....	....	....	67	3	70
Arts	542	233	775	406	145	551	322	124	446	202	103	305	5	7	12	12	10	22	1,489	622	2,111
Arts-Education	2	7	9	1	7	8	7	10	17	8	17	25	....	....	....	....	....	....	18	41	59
Commerce	475	164	639	426	128	554	340	79	419	367	90	457	19	1	20	6	4	10	1,633	466	2,099
Education	167	305	472	133	313	446	120	277	397	163	330	493	10	44	54	37	119	156	630	1,388	2,018
Engineering	413	1	414	538	4	542	355	2	357	294	....	294	8	....	8	10	....	10	1,618	7	1,625
Pharmacy	34	5	39	36	7	43	29	2	31	40	3	43	1	....	1	....	....	....	140	17	157
Veterinary Medicine	69	....	69	46	....	46	33	....	33	34	....	34	2	....	2	....	....	....	184	....	184
	1,892	826	2,718	1,764	683	2,447	1,346	590	1,936	1,217	655	1,872	53	55	108	68	142	210	6,340	2,951	9,291

PROFESSIONAL COLLEGES

Dentistry	67	1	68	38	....	38	47	....	47	49	1	50	....	....	....	....	....	....	201	2	203
Law	99	5	104	86	3	89	84	1	85	....	....	....	....	....	....	....	....	....	269	9	278
Medicine	95	4	99	82	5	87	86	4	90	77	....	77	....	....	....	....	....	....	340	13	353
Nursing .....	....	63	63	....	24	24	....	37	37	....	....	....	....	....	....	....	....	....	....	124	124
	261	73	334	206	32	238	217	42	259	126	1	127	....	....	....	....	....	....	810	148	958
TOTAL.....	2,153	899	3,052	1,970	715	2,685	1,563	632	2,195	1,343	656	1,999	53	55	108	68	142	210	7,150	3,099	10,249
Graduate School																			1,333	454	1,787
Less Duplicates in Graduate-Medicine.....																			8,483	3,553	12,036
																			9	2	11
GRAND TOTAL																			8,474	3,551	12,025

ENROLLMENT OF STUDENTS FOR THE YEAR 1931-32

B

COLLEGES	ACADEMIC YEAR			SUMMER QUARTER			TOTAL ACADEMIC YEAR AND SUMMER QUARTER			SUMMER QUARTER DUPLICATES			FISCAL YEAR		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agriculture	561	407	968	65	138	203	626	545	1,171	44	73	117	582	472	1,054
Applied Optics	67	3	70	4	.....	4	71	3	74	3	.....	3	68	3	71
Arts and Sciences	1,489	622	2,111	310	148	458	1,799	770	2,569	141	51	192	1,658	719	2,377
Arts-Education	18	41	59	1	23	24	19	64	83	.....	13	13	19	51	70
Commerce and Administration.....	1,633	466	2,099	230	75	305	1,863	541	2,404	138	46	184	1,725	495	2,220
Dentistry	201	2	203	.....	.....	.....	201	2	203	.....	.....	.....	201	2	203
Education	630	1,388	2,018	318	949	1,267	948	2,337	3,285	72	248	320	876	2,089	2,965
Engineering	1,618	7	1,625	272	2	274	1,890	9	1,899	224	.....	224	1,666	9	1,675
Law	269	9	278	.....	.....	.....	269	9	278	.....	.....	.....	269	9	278
Medicine	340	13	353	4	.....	4	344	13	357	4	.....	4	340	13	353
Nursing .....	.....	124	124	.....	91	91	.....	215	215	.....	64	64	.....	151	151
Pharmacy	140	17	157	22	2	24	162	19	181	18	1	19	144	18	162
Veterinary Medicine	184	.....	184	14	.....	14	198	.....	198	14	.....	14	184	.....	184
Graduate School	1,333	454	1,787	1,534	643	2,177	2,867	1,097	3,964	504	136	640	2,363	961	3,324
TOTAL.....	8,483	3,553	12,036	2,774	2,071	4,845	11,257	5,624	16,881	1,162	632	1,794	10,095	4,992	15,087
Less Duplicates in Graduate-Medicine.....	9	2	11	.....	.....	.....	9	2	11	.....	.....	.....	9	2	11
Less number who changed Colleges.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	130	57	187	130	57	187
Commerce Extension	544	103	647	.....	.....	.....	544	103	647	.....	.....	.....	544	103	647
GRAND TOTAL.....	9,018	3,654	12,672	.....	.....	.....	11,792	5,725	17,517	.....	.....	.....	10,500	5,036	15,536

YEAR SUMMARY—1931-32
OF ENROLLMENT BY STATES AND COUNTRIES

<i>States</i>	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Alabama	13	4	3	14
Arizona	1	..	..	1
Arkansas	3	3	1	5
California	12	2	1	13
Colorado	4	5	1	8
Connecticut	32	1	1	32
Delaware	1	..	..	1
District of Columbia.....	10	5	1	14
Florida	7	9	2	14
Georgia	7	5	1	11
Idaho	2	1	..	3
Illinois	44	28	8	64
Indiana	96	38	12	122
Iowa	14	14	4	24
Kansas	10	19	5	24
Kentucky	36	21	6	51
Louisiana	7	1	1	7
Maine	1	1	..	2
Maryland	8	3	..	11
Massachusetts	40	6	3	43
Michigan	36	16	3	49
Minnesota	11	2	1	12
Mississippi	4	3	2	5
Missouri	16	12	2	26
Montana	1	..	..	1
Nebraska	6	1	..	7
Nevada .....	..	..	..	..
New Hampshire	3	2	1	4
New Jersey	117	12	8	121
New Mexico .....	..	4	..	4
New York	220	36	20	236
North Carolina	5	8	2	11
North Dakota	1	2	..	3
Ohio	10,829	4,355	1,806	13,378
Oklahoma	1	10	1	10
Oregon	3	3	3	3
Pennsylvania	182	59	23	218
Rhode Island	4	1	1	4
South Carolina	5	2	2	5
South Dakota	3	2	1	4
Tennessee	13	9	3	19
Texas	16	5	1	20
Utah	4	1	1	4
Vermont	2	2	..	4
Virginia	21	14	6	29
Washington	4	5	3	6
West Virginia	95	72	12	155
Wisconsin	12	4	1	15
Wyoming	3	..	..	3
Total States.....	11,976	4,808	1,953	14,820

<i>Countries</i>	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Bermuda	1	..	..	1
Canada	6	4	2	8
Canal Zone	1	..	..	1
Czechoslovakia	1	2	..	3
China	21	19	16	24
England	1	..	..	1
France .....	..	1	..	1
Germany	1	..	..	1
Haiti	3	..	..	3
Hawaii	4	2	2	4
India .....	..	1	..	1
Italy	1	..	..	1
Japan	3	1	1	3
Persia	1	..	..	1
Russia	2	2	2	2
Philippine Islands	9	2	2	9
Porto Rico	3	2	2	3
South America	2	1	1	2
Total Countries	60	37	28	69
Total States and Countries	12,025	4,845	1,981	14,889

ENROLLMENT IN OHIO BY COUNTIES—YEAR 1931-32

	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Adams	13	11	3	21
Allen	84	38	7	115
Ashland	47	18	6	59
Ashtabula	79	27	8	98
Athens	33	32	5	60
Auglaize	63	18	8	73
Belmont	113	41	13	141
Brown	16	10	3	23
Butler	66	24	6	84
Carroll	15	12	4	23
Champaign	50	21	8	63
Clark	112	40	16	136
Clermont	30	4	2	32
Clinton	47	24	4	67
Columbiana	86	40	15	111
Coshocton	47	19	10	56
Crawford	73	46	14	105
Cuyahoga	965	214	91	1,089
Darke	48	30	10	68
Defiance	22	19	4	37
Delaware	129	94	31	192
Erie	74	10	7	77
Fairfield	112	53	18	147
Fayette	47	22	11	58
Franklin	4,437	1,453	822	5,069
Fulton	21	20	7	34
Gallia	25	42	8	59
Geauga	32	19	8	43
Greene	97	70	35	132
Guernsey	68	36	14	90
Hamilton	146	35	19	162

	Year Academic	Quarter Summer	Duplicates Summer Quarter	Year Fiscal
Hancock	44	50	16	78
Hardin	63	38	11	90
Harrison	19	12	3	28
Henry	22	15	3	34
Highland	30	27	5	52
Hocking	22	10	2	30
Holmes	8	10	2	16
Huron	37	15	3	49
Jackson	38	37	6	69
Jefferson	95	34	15	114
Knox	79	55	22	112
Lake	52	20	9	63
Lawrence	29	18	4	43
Licking	143	88	22	209
Logan	58	39	9	88
Lorain	114	39	18	135
Lucas	135	63	20	178
Madison	50	30	10	70
Mahoning	204	58	23	239
Marion	89	34	15	108
Medina	35	8	4	39
Meigs	27	12	3	36
Mercer	29	19	3	45
Miami	62	33	10	85
Monroe	29	14	4	39
Montgomery	268	92	41	319
Morgan	43	16	4	55
Morrow	26	23	7	42
Muskingum	130	68	28	170
Noble	19	16	4	31
Ottawa	28	8	1	35
Paulding	12	8	2	18
Perry	47	25	7	65
Pickaway	76	37	15	98
Pike	18	8	4	22
Portage	55	38	10	83
Preble	34	18	5	47
Putnam	20	25	5	40
Richland	78	42	21	99
Ross	78	31	8	101
Sandusky	60	22	7	75
Scioto	83	33	11	105
Seneca	51	35	7	79
Shelby	41	16	6	51
Stark	213	77	28	262
Summit	145	51	22	174
Trumbull	84	43	8	119
Tuscarawas	95	42	19	118
Union	51	34	7	78
Van Wert	45	23	7	61
Vinton	7	7	1	13
Warren	31	6	3	34
Washington	63	46	15	94
Wayne	101	38	15	124
Williams	44	37	12	69
Wood	41	51	12	80
Wyandot	32	19	5	46
Total	10,829	4,355	1,806	13,378

THE OHIO STATE UNIVERSITY
RELIGIONS OF STUDENTS—YEAR 1931-32

	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Advent Christian	1	1	..	2
African Methodist	36	30	14	52
Anglican	2	..	..	2
Atheist	1	1	..	2
Baptist	443	265	85	623
Brethren	43	54	15	82
C. & M. Alliance.....	1	1	1	1
Catholic	883	228	136	975
Christian	223	127	35	315
Christian Congregational	24	13	5	32
Christian Science	122	34	16	140
Church of God.....	9	11	2	18
Church of Christ.....	262	94	36	320
Community	74	15	9	80
Congregational	417	182	79	520
Disciple	34	22	8	48
Dunkard .....	..	1	..	1
Episcopal	393	124	58	459
Evangelical	134	53	26	161
Evangelical Protestant	19	3	2	20
Federated	1	2	..	3
Free Thinker	1	..	..	1
Friends	54	30	11	73
Greek Orthodox	10	3	3	10
Humanitarian	1	..	..	1
Independent Protestant	12	3	2	13
International Bible Students.....	5	3	2	6
Jewish	847	89	52	884
Latter Day Saints	9	2	1	10
Lutheran	661	296	117	840
Mennonite	27	26	8	45
Methodist Episcopal	3,019	1,490	546	3,963
Methodist Protestant	60	24	4	80
Southern Methodist	5	4	2	7
Metropolitan	1	..	..	1
Mission	1	..	..	1
Moravian	8	..	..	8
Nazarene	9	3	..	12
New Thought	3	1	1	3
Non-Sectarian	266	350	151	465
Orthodox	15	1	1	15
Presbyterian	1,471	706	273	1,904
Protestant	127	41	15	153
Protestant Episcopal	4	3	..	7
Reformed	166	71	25	212
Reformed Jewish	23	1	1	23
Roumanian Orthodox	2	2	..	4
Russian Orthodox	1	2	1	2
Salvation Army	1	..	..	1
Syrian Orthodox	1	1	1	1
Seventh Day Adventist.....	6	6	3	9
Swedenborgian	2	2	1	3
Swedish Mission	1	1	1	1
Serbian Orthodox	1	1	1	1
Union	2	4	1	5
Unitarian	28	6	2	32
United Brethren	192	130	41	281
United Presbyterian	117	72	32	157
Universalist	26	8	2	32
None given	1,718	202	153	1,767
Total.....	12,025	4,845	1,981	14,889

OCCUPATION OF PARENTS OR GUARDIANS—YEAR 1931-32

	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Accountants, Auditors, Cashiers, Clerks, Bookkeepers	303	99	52	350
Advertising	42	5	3	44
Apiarist	1	1	1	1
Architects, Draftsmen	33	3	2	34
Army and Navy	21	10	4	27
Attorney, Judges, Statesmen	185	60	29	216
Auctioneers	5	1	..	6
Authors and Writers	5	..	..	5
Automobile Dealers	25	5	3	27
Bakers, Confectioners	30	5	3	32
Bankers, Finance	91	28	13	106
Barbers, Beauty Culturists	37	18	5	50
Baseball Players	3	..	..	3
Blacksmiths	18	8	2	24
Bookbinders	1	1	1	1
Bricklayers	17	4	3	18
Brokers, Investment Securities	36	9	7	38
Business	131	83	33	181
Business Executives, etc.	435	31	21	445
Butcher, Meat Dealers	35	6	2	39
Cantors	3	..	..	3
Carpenters, Cabinet Makers	118	53	12	159
Chauffeurs	7	..	..	7
Chefs, Cooks, Caterers	16	5	1	20
Chemists	17	3	3	17
Cigar Makers	2	1	..	3
Clergymen, Rabbi	172	131	57	246
Coal and Ice	44	15	5	55
Contractors	257	85	42	300
Dairymen	40	15	7	48
Decorators, Painters	48	13	6	55
Dentists	88	23	10	101
Designers, Commercial Artists	15	4	1	18
Detectives	4	2	1	5
Druggists, Pharmacists	80	25	15	90
Dry Cleaners, Pressers	15	..	..	15
Editors, Newspapermen	37	9	8	38
Electricians	35	14	6	43
Engineers (Professional)	213	33	24	227
Engineers (Stationary)	116	21	11	126
Farmers and Ranchers	1,304	837	260	1,881
Filling Station Operators	22	4	3	23
Fishermen	1	2	1	2
Gardeners, Horticulturists, Nurserymen	75	20	8	87
Foremen	102	39	21	120
Fruit Dealers	18	1	1	18
Furriers	9	1	..	10
Garage and Repairing	21	3	..	24
Gas and Fuel	5	2	2	5
Glassworkers	3	1	1	3
Golf Professionals	4	..	..	4
Government, State, County, and City	313	84	47	350
Grain, Hay, Lumber	40	20	8	52
Grocers	109	28	12	125
Hotel and Restaurant Owners and Employees	67	17	11	73
Importers	2	..	..	2
Inspectors	32	13	6	39
Insurance Salesmen and Claim Examiners	167	51	22	196
Interior Decorators	17	3	..	20
Iron and Steel Workers	59	9	4	64
Janitors, Maids	48	16	10	54
Jewelers, Watchmakers	36	5	3	38
Jobbers	10	1	..	11

	Academic Year	Summer Quarter	Summer Quarter Duplicates	Fiscal Year
Junk Dealers, Scrap Iron.....	12	3	2	13
Laborers	113	80	32	161
Ladies Specialties	1	2	..	3
Laundrymen	14	1	..	15
Leather Workers	3	6	2	7
Librarians	7	2	1	8
Liverymen, Teamsters	15	..	..	15
Livestock Dealers	13	7	4	16
Locksmiths, Bicycle Repairers.....	1	..	..	1
Machinists	98	26	10	114
Manufacturers	176	46	25	197
Marblesetters .....	..	1	..	1
Mechanics	63	28	8	83
Merchants	610	161	81	690
Metal Trades	22	4	4	22
Millers	6	9	5	10
Millworkers, Shopworkers	118	8	..	126
Miners	17	9	3	23
Missionaries	7	3	..	10
Musicians, Artists	19	2	2	19
Oil Producers	23	9	2	35
Opticians, Optometrists	19	5	2	22
Osteopaths, Chiropractors	8	2	1	9
Paper Makers	4	1	1	4
Photographers	9	7	4	12
Physicians, Surgeons, Nurses.....	243	73	38	278
Piano Tuners	1	..	..	1
Plasterers	6	1	..	7
Plumbers	16	7	2	21
Politicians	1	2	1	2
Potters	16	7	3	20
Poultrymen	15	8	4	19
Printers, Publishers	44	10	4	50
Quarrymen	5	1	..	6
Railway	416	167	76	507
Real Estate	196	52	27	221
Research Workers	4	..	..	4
Retired	404	272	89	587
Roofers, Tinnners	5	..	..	5
Rubber Workers	10	4	1	13
Sailors	2	1	1	2
Salesmen	543	118	57	604
School Officials	351	206	94	463
Shoe Workers, Repairers	22	4	3	23
Social Workers, House Mothers	18	7	1	24
Students	9	2	..	11
Surveyors	3	2	..	5
Tailors, Seamstresses	75	14	7	82
Telephone, Telegraph	55	9	5	59
Toolmakers	11	..	..	11
Theatre Owners and Operators	8	2	2	8
Traffic Managers	16	9	1	24
Transfer and Storage	21	5	3	23
Undertakers	19	11	4	26
Upholsterers	3	..	..	3
Veterinarians	42	6	4	44
Violin Makers, Repairers	1	..	..	1
Watchmen, Sextons	10	..	..	10
Well Drillers	8	1	..	9
Wholesale	50	8	4	54
Y.M.C.A., Y.W.C.A., and other religious workers...	13	9	3	16
Mothers with no occupations	1,086	297	215	1,168
None given or deceased	1,644	1,125	331	2,438
Total.....	12,025	4,845	1,981	14,889

STUDENT ATTENDANCE AT THE UNIVERSITY BY YEARS D

BEGINNING 1890-1891

(From 1890 to 1930 the student attendance was analyzed according to a different plan, which is now discontinued, and the annual attendance as printed below will be published hereafter.)

1890-1891.....	305	1911-1912.....	3,928
1891-1892.....	465	1912-1913.....	3,969
1892-1893.....	642	1913-1914.....	4,435
1893-1894.....	686	1914-1915.....	5,332
1894-1895.....	745	1915-1916.....	5,822
1895-1896.....	969	1916-1917.....	6,188
1897-1898.....	1,009	1917-1918.....	5,150
1897-1898.....	1,150	1918-1919.....	5,725
1898-1899.....	1,178	1919-1920.....	7,817
1899-1900.....	1,268	1920-1921.....	8,313
1900-1901.....	1,481	1921-1922.....	8,850
1901-1902.....	1,547	1922-1923.....	9,495
1902-1903.....	1,757	1923-1924.....	10,488
1903-1904.....	1,933	1924-1925.....	11,535
1904-1905.....	1,958	1925-1926.....	12,085
1905-1906.....	2,157	1926-1927.....	13,023
1906-1907.....	2,277	1927-1928.....	13,925
1907-1908.....	2,473	1928-1929.....	14,403
1908-1909.....	2,794	1929-1930.....	15,142
1909-1910.....	3,275	1930-1931.....	15,693
1910-1911.....	3,439	1931-1932.....	15,536

APPENDIX II

BOARD OF TRUSTEES—1931-1932

	Date of Original Appointment	Term Expires
HARRY A. CATON, Coshocton.....	May 14, 1925	May 13, 1932
MRS. ALMA W. PATERSON, Columbus.....	Mar. 27, 1924	May 13, 1933
HERBERT S. ATKINSON, Columbus.....	Mar. 17, 1925	May 13, 1934
EGBERT H. MACK, Sandusky.....	Dec. 12, 1922	May 13, 1935
JOHN KAISER, Marietta.....	Feb. 25, 1915	May 13, 1936
*JULIUS F. STONE, Columbus.....	Mar. 17, 1925	May 13, 1937
LAWRENCE E. LAYBOURNE, Springfield.....	May 14, 1921	May 13, 1938

* Julius F. Stone served also as a member from May 13, 1909 to March 21, 1917.

OFFICERS OF THE BOARD

JULIUS F. STONE, *Chairman*
July 1, 1931, to May 15, 1932

LAWRENCE E. LAYBOURNE, *Chairman*
May 16, 1932, to June 30, 1932

MRS. ALMA W. PATERSON, *Vice-Chairman*

CARL E. STEEB, *Secretary*

CHAS. F. KETTERING, *Treasurer*

ADMINISTRATIVE OFFICERS

For the year ending June 30, 1932

GEORGE W. RIGHTMIRE.....*President*
Office—Administration Building, UN-3148 ; Campus 312.
Residence—Ohio State University Campus, UN-3148 ; Campus 274.

WILLIAM OXLEY THOMPSON.....*President Emeritus*
Residence—55 Woodland Avenue, FA-9130.

JAMES LEWIS MORRILL.....*Vice President*
Office—Administration Building, UN-3148 ; Campus 628.
Residence—459 West 8th Avenue, UN-9427-W.

CARL E. STEEB.....*Secretary of the Board of Trustees and Business Manager*
Office—Administration Building, UN-3148 ; Campus 332.
Residence—198 West Eleventh Avenue, UN-4732.

GEORGE W. ECKELBERRY.....*Assistant to the President*
Office—Administration Building, UN-3148 ; Campus 380.
Residence—2023 Collingswood Road, UN-8841-W.

EDITH D. COCKINS.....
Registrar, University Editor, Secretary of the University Faculty, and Alumni Recorder
Office—Administration Building, UN-3148 ; Campus 314.
Residence—1580 Guilford Road, UN-9635.

BLAND L. STRADLEY.....*University Examiner*
Office—Administration Building, UN-3148 ; Campus 412.
Residence—Canal Winchester, Canal Winchester Ex. 71.

KATHERINE A. VOGEL.....	<i>Executive Clerk</i>
Office—Administration Building, UN-3148; Campus 312.	
Residence—1040 Elmwood Avenue, UN-3653-R.	
CHARLES A. KUNTZ.....	<i>Comptroller</i>
Office—Administration Building, UN-3148; Campus 332.	
Residence—265 Tulane Road, LA-3606.	
FLORIS D. HANE.....	<i>Cashier</i>
Office—Administration Building, UN-3148; Campus 371.	
Residence—373 Thirteenth Avenue, WA-1054.	
JOSEPH A. PARK.....	<i>Dean of Men</i>
Office—Administration Building, UN-3148; Campus 283.	
Residence—1474 Doone Road, UN-1559-J.	
ESTHER ALLEN GAW.....	<i>Dean of Women</i>
Office—Pomerene Hall, UN-3148; Campus 480.	
Residence—60 Jefferson Avenue, MA-2692.	
EMMA E. PROUT.....	<i>House Superintendent, Residence Halls</i>
Office—Oxley Hall, UN-3148; Campus 346.	
Residence—Mack Hall, UN-3148; Campus 264.	
EDWARD S. DRAKE.....	<i>Manager of Ohio Union</i>
Office and Residence—Ohio Union, UN-3148; Campus 273.	
JAMES E. POLLARD.....	<i>Director of News Bureau</i>
Office—Administration Building, UN-3148; Campus 491.	
Residence—2000 Devon Road, UN-5409.	
WILLIAM C. MCCracken.....	<i>Chief Engineer and Superintendent of Buildings and Grounds</i>
Office—Service Building, UN-3148; Campus 428, 517.	
Residence—2005 Berkshire Road, UN-2492.	
RAY M. ROYER.....	<i>Purchasing Agent</i>
Office—Administration Building, UN-3148; Campus 374.	
Residence—1828 Arlington Avenue, UN-2062.	
FRED E. JONES.....	<i>Director of Stores and Receiving Department</i>
Office—Service Building, UN-3148; Campus 354.	
Residence—255 Oakland Park Avenue, LA-3461.	
CHESTER W. McCLINTOCK.....	<i>Storekeeper</i>
Office—Chemistry Building, UN-3148; Campus 228.	
Residence—232 Glenmont Avenue, LA-4070.	
H. DWIGHT SMITH.....	<i>University Architect</i>
Office—100 Brown Hall, UN-3148; Campus 361.	
Residence—1950 Arlington Avenue, UN-9695-J.	
GEORGE H. SIEBERT.....	<i>Manager of the University Bookstore</i>
Office—Derby Hall, UN-3148; Campus 511.	
Journalism Building, UN-3148; Campus 275.	
Residence—2239 Fairfax Road, KI-1342.	

CHANGES IN FACULTY

NEW APPOINTMENTS 1931-1932

Howard W. Bibber.....	Associate Professor.....	Electrical Engineering
Captain Howard E. Camp....	Assistant Professor.....	Military Science
Captain Walter B. Cochran....	Assistant Professor.....	Military Science
Everett W. Hall.....	Assistant Professor.....	Philosophy
Captain Lloyd L. Hamilton....	Assistant Professor.....	Military Science
Major Forest L. Holycross....	Assistant Professor.....	Military Science
1st. Lt. Francis E. Kidwell....	Assistant Professor.....	Military Science
William F. McDonald.....	Associate Professor.....	History
2nd. Lt. John A. McFarland....	Assistant Professor.....	Military Science
Major Clinton I. McClure....	Assistant Professor.....	Military Science

PROMOTIONS IN RANK—1931-1932

Don Louis Demorest....	Assistant Professor to Associate Professor....	Romance Languages
Harvey Walker	Assistant Professor to Associate Professor....	Political Science

APPENDIX III

THE WORK OF INSTRUCTORS—1931-1932

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
ACCOUNTING												
Elements of Accounting.....	401	5	12	401	5	203	401	5	203	401	5	96
Elements of Accounting.....	402	5	23	402	5	81	402	5	143	402	5	163
Outline of Accounting.....	...	...	...	405	5	59	405	5	35	...	...	...
Advanced Principles of Accounting.....	601	5	26	601	5	113	601	5	62	601	5	45
Advanced Principles of Accounting.....	...	...	...	602	5	25	602	5	32	602	5	21
Cost Accounting.....	...	...	...	603	4	34	603	4	54	...	...	...
Cost Accounting.....	...	...	...	...	...	...	604	4	26	604	4	45
Problems in Cost Accounting.....	...	...	...	605	3	9	...	...	...	...	...	...
Institutional Accounting.....	...	...	...	...	...	...	...	...	...	606	2	9
Auditing.....	...	...	...	607	2	39	607	2	10	...	...	...
Auditing.....	...	...	...	...	...	...	608	2	27	608	2	16
Income Tax Accounting.....	...	...	...	611	2	17	...	...	...	611	2	47
Constructive Accounting.....	...	...	...	612	4	15	...	...	...	612	4	44
Accounting Practice.....	613	4	9	613	4	32	613	4	10	...	...	...
Accounting Practice.....	...	...	...	...	...	...	613	4	28	614	4	12
Business Statements.....	616	3	11	616	3	24	616	3	29	616	3	67
Managerial Accounting.....	...	...	...	...	...	...	617	3	11	...	...	...
Managerial Accounting.....	...	...	...	...	...	...	...	...	...	618	3	13
Advanced Accounting Theory.....	...	...	...	...	...	...	...	...	...	622	3	22
Retail Accounting.....	...	...	...	623	3	9	...	...	...	...	...	...
Factory Costs.....	...	...	...	...	...	...	...	...	...	624	5	62
Research in Accounting.....	801	...	5	...	...	...	...	...	...	...	...	...
Research in Accounting.....	...	...	...	...	...	...	...	...	...	803	...	1
Graduate Seminary in Accounting.....	...	...	...	804	2	7	...	...	...	...	...	...
Graduate Seminary in Accounting.....	...	...	...	...	...	...	805	2	6	...	...	...
Graduate Seminary in Accounting.....	...	...	...	...	...	...	...	...	...	806	2	6
ADULT EDUCATION												
Parental Education.....	401	3	2	401	3	1	...	...	...	...	...	...
Theory and Problems of Adult Education.....	609	2	3	609	2	5	609	2	1	609	2	2
Leadership Training.....	615	3	3	...	...	...	615	3	1	615	3	1
Minor Problems.....	650	1+	3	650	1+	6	650	1+	3	650	1+	5
Advanced Leadership Training.....	...	...	...	815	1	1	...	...	...	...	...	...

AGRICULTURAL CHEMISTRY

General Agricultural Chemistry.....	...	...	...	401	5	71	401	5	47	401	5	35
Household Chemistry .....	...	...	...	402	5	47	402	5	27	402	5	18
Household Chemistry .....	...	...	...	403	5	19	403	5	36	403	5	33
Introductory Agricultural Analysis.....	...	...	...	...	...	...	404	3	3	...	...	...
Animal Chemistry .....	...	...	...	...	...	...	...	...	...	406	3	41
General Biological Chemistry.....	...	...	...	601	5	22	601	5	25	...	...	...
Food Inspection and Analysis.....	...	...	...	...	...	...	...	...	...	602	5	4
Dairy Chemistry .....	...	...	...	604	5	10	...	...	...	...	...	...
Dairy Chemistry .....	...	...	...	...	...	...	605	5	15	...	...	...
Advanced Dairy Chemistry.....	...	...	...	...	...	...	...	...	...	606	5	8
Chemistry of Nutrition.....	...	...	...	...	...	...	...	...	...	*607	5	13
Animal Nutrition .....	...	...	...	...	...	...	...	...	...	*608	5	...
Special Problems .....	...	...	...	701	3-15	5	701	3-15	11	701	3-15	3
Plant Chemistry .....	...	...	...	...	...	...	...	...	...	801	5	6
Special Problems .....	...	...	...	802	5-15	2	802	5-15	3	802	5-15	1
Research .....	...	...	...	...	...	...	803	15	1	803	15	3
Seminary .....	...	...	...	804	1	9	804	1	14	...	...	...

AGRICULTURAL EDUCATION

Principles Applied to the Teaching of Vocational Agriculture in Secondary Schools....	400	5	9	...	...	...	400	5	16	400	5	22
Teaching of Vocational Agriculture in Secondary Schools	401	5	12	401	5	11	...	...	...	401	5	6
Observation of the Teaching of Vocational Agriculture .....	...	...	...	402	5	14	402	5	9	402	5	9
Supervised Teaching of Vocational Agriculture .....	...	...	...	403	5	14	403	5	9	403	5	9
Special Methods of Teaching Vocational Agriculture in Secondary Schools.....	601	5	13	601	5	3	601	5	15	601	5	14
History of Agricultural Education.....	...	...	...	...	...	...	602	5	2	...	...	...
Project Records and Analysis.....	605	3	13	...	...	...	...	...	...	...	...	...
Special Problems	801	3-12	4	...	...	...	801	3-12	2	801	3-12	3
The Problem Method Applied to Secondary and College Teaching in Agriculture.....	803	5	16	...	...	...	803	5	2	...	...	...
Organization and Methods of Conducting Part-Time and Evening Schools in Vocational Agriculture	808	3	15	...	...	...	...	...	...	...	...	...
Seminary in Agricultural Education.....	810	1-3	12	...	...	...	...	...	...	...	...	...

AGRICULTURAL ENGINEERING

Field Machinery .....	...	...	...	401	5	40	401	5	50	...	...	...
Agricultural Drawing .....	...	...	...	402	5	27	402	5	72	402	5	29
Farm Motors and Tractors.....	...	...	...	...	...	...	404	5	18	...	...	...
Farm Conveniences .....	...	...	...	...	...	...	405	5	3	...	...	...
Dairy Mechanics .....	...	...	...	408	3	13	...	...	...	...	...	...
Farm Structures .....	...	...	...	...	...	...	602	5	7	...	...	...
Advanced Farm Power and Power Machinery.....	...	...	...	603	5	6	...	...	...	...	...	...
Farm Drainage .....	...	...	...	...	...	...	...	...	...	604	5	9
Advanced Field Machinery.....	605	5	8

* 607-608 taught together.

THE WORK OF INSTRUCTORS—1931-1932—Continued

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THE OHIO STATE UNIVERSITY

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Special Problems	701	3-15	4	701	3-15	4	701	3-15	2
Research	801-2-3	3-10	1	801-2-3	3-10	1
AGRICULTURAL EXTENSION												
Extension Methods	401	3	12	...	...	...
Extension Education	600	3	7
Special Problems	701	...	11	701	...	9	701	...	7
ANATOMY												
Comparative Anatomy	406	5	100	...	...	...
Comparative Anatomy	407	5	76
Visceral Anatomy	410	3	48	...	...	...	...	...	...
Elementary Human Anatomy.....	412	5	48
Comparative Anatomy of the Vertebrates.....	414	5	82	...	...	...
The Eye	437	4	25
Seminary	601	1	4	...	...	...	...	...	...
Seminary	602	1	38	...	...	...
Seminary	603	1	23
Minor Problems	604	3 or 5	2	...	...	...	...	...	...
Minor Problems	606	3-5	1
Cytology	611	5	21	...	...	...
Cytology	612	5	7
Comparative Anatomy of the Vertebrates.....	613	5	18	613	5	96	...	...	...	...	...	...
Comparative Anatomy of the Vertebrates.....	614	5	4	...	...	...
Comparative Vertebrate Embryology.....	615	5	6
Comparative Vertebrate Embryology.....	616	5	12	...	...	...	616	5	56	...	...	...
Elementary Neurology	617	5	20	...	...	...	...	...	...
Comparative Anatomy of the Vertebrates.....	619	5	80
Human Anatomy	621	5	100	...	...	...	...	...	...
Human Anatomy	622	5	90	...	...	...
Human Anatomy	623	5	83
Histology	624	5	100	...	...	...	...	...	...
Embryology	625	5	89	...	...	...
Neurology	626	5	82
Topographical Anatomy	627	5	86	...	...	...	...	...	...
Special Advanced Anatomy.....	628	3	3	628	3	1	628	3	1
Human Anatomy	638	7	67	...	...	...	...	...	...
Human Anatomy	639	7	68	...	...	...
Histology and Embryology.....	640	7	66
Advanced Anatomy	801	5	1	...	...	...	...	...	...

ANIMAL HUSBANDRY

Elementary Live Stock Judging.....	401	5	70	401	5	28	401	5	18
Feeding Live Stock.....	402	5	49	402	5	36	403	5	43
Types and Breeds of Live Stock.....	...	...	...	...	...	...	...	...	...
Dairy Cattle and Milk Secretion.....	...	...	...	404	3	21	...	...	...
Dairy Cattle Breeds.....	405	5	8	...	...	...	...	...	...
Breeds of Beef Cattle and Swine.....	...	...	...	...	...	...	406	3	10
Selection and Cutting of Meat.....	...	...	...	407	3	23	...	...	...
Animal Breeding.....	...	...	...	...	...	...	409	5	35
Horse Production and Management.....	...	...	...	601	5	13	...	...	...
Beef Cattle Production and Management.....	...	...	...	...	...	...	602	5	6
Swine Production and Management.....	...	...	...	...	...	...	603	5	20
Dairy Cattle Production and Management.....	...	...	...	604	5	12	...	...	...
Sheep Production and Management.....	...	...	...	...	...	...	605	5	10
Advanced Live Stock Judging.....	606	5	12	...	...	...	...	...	...
Meats and Meat Products.....	...	...	...	607	5	14	...	...	...
Live Stock Markets and Marketing.....	608	5	20	...	...	...	...	...	...
Breeding Live Stock.....	...	...	...	609	5	19	...	...	...
Herd Book Study.....	...	...	...	611	3	2	...	...	...
Dairy Cattle Seminar.....	...	...	...	...	...	...	614	5	4
Advanced Dairy Cattle Judging.....	...	...	...	...	...	...	615	3	13
Inspection Trip.....	...	...	...	...	...	...	616	3	7
Dairy Production for Teachers of Vocational Agriculture.....	...	...	...	...	...	...	617	5	13
Special Problems.....	701	3-15	*24	701	3-15	10	701	3-15	10
Research Work.....	801	3-15	3	801	3-15	5	801	3-15	4

APPLIED OPTICS

Vision Optics.....	411	4	26	...	...	...	...	...	...
Vision Optics.....	...	...	...	412	4	24	...	...	...
Vision Optics.....	...	...	...	...	...	...	413	4	24
Theoretical Applied Optics.....	421	3	14	...	...	...	...	...	...
Theoretical Applied Optics.....	...	...	...	422	3	14	...	...	...
Theoretical Applied Optics.....	...	...	...	...	...	...	423	3	14
Mechanical Optics.....	431	2	14	...	...	...	...	...	...
Mechanical Optics.....	...	...	...	432	2	14	...	...	...
Mechanical Optics.....	...	...	...	...	...	...	433	2	14
Clinical Laboratory Practice.....	441	5	14	...	...	...	...	...	...
Clinical Laboratory Practice.....	...	...	...	442	5	14	...	...	...
Clinical Laboratory Practice.....	...	...	...	...	...	...	443	5	14

ARCHITECTURE

Perspective.....	...	...	...	402	3	35	...	...	...
Elements of Architecture.....	413	3	17	...	...	...	...	...	...
Elements of Architecture.....	...	...	...	414	3	14	...	...	...
Elements of Architecture.....	...	...	...	...	...	...	415	3	11
Elements of Architecture.....	420	8	28	...	...	...	...	...	...
Order Problems.....	422	5	10	422	5	16	422	5	9
Order Problems.....	423	5	15	423	5	5	423	5	11
History of Architecture.....	544	3	37	...	...	...	...	...	...
History of Architecture.....	...	...	...	545	3	33	...	...	...

* Includes National Swine Show Judging Team

THE WORK OF INSTRUCTORS—1931-1932—Continued

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THE OHIO STATE UNIVERSITY

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
History of Architecture.....	546	3	30
Plan Composition.....	604	2	32	...	...	...	...	...	...
Architectural Design.....	624	5	10	624	5	5	624	5	5
Architectural Design.....	625	5	10	625	5	9	625	5	3
Architectural Design.....	627	5	2	627	5	10	627	5	4
Architectural Design.....	628	5	1	...	...	...	628	5	9
Construction: Wood.....	630	5	20	...	...	...
Contract Drawings.....	638	3	9
Construction: Timber Framing.....	640	5	14	...	...	...
Construction: Masonry.....	641	5	15
History of Architecture.....	647	5	25	...	...	...	...	...	...
History of Architecture.....	648	3	17
History of the Decorative Arts.....	649	3	18	...	...	...
Professional Practice.....	715	5	25
Thesis.....	718	5	3	718	5	3	718	5	11
Advanced Architectural Design.....	727	8	8	727	8	8	727	8	2
Advanced Architectural Design.....	728	8	1	728	8	7	728	8	3
Advanced Architectural Design.....	730	8	2	...	...	...	730	8	2
Ornament.....	731	3	10	...	...	...	...	...	...
Construction.....	736	5	20
Building Sanitation.....	737	2	28	...	...	...
Construction: Design.....	742	5	13	...	...	...	...	...	...
Construction: Design.....	743	5	13	...	...	...
Fire Protection.....	748	2	15	...	...	...
ASTRONOMY												
Elementary Astronomy.....	401	5	4	401	5	16	401	5	12	401	5	7
Elementary Astronomy.....	402	5	12	402	5	7
Descriptive Geometry.....	500	5	9	500	5	11	500	5	8	500	5	10
Advanced Astronomy.....	507	3-5	1	...	...	...	...	...	...
Introduction to Celestial Mechanics.....	605	5	3	...	...	...	605	5	2	...	...	...
BACTERIOLOGY												
Bacteriology.....	405	3	35	...	...	...
General Bacteriology.....	431	5	45	...	...	...	...	...	...
Pathogenic Bacteriology.....	432	5	43	...	...	...
Serology for Veterinary Students.....	433	3	35
General Bacteriology.....	607	5	74	607	5	116	607	5	35	607	5	39
Pathogenic Bacteria.....	608	3	53	...	...	...	608	3	63	...	...	...
Pathogenic Bacteria.....	609	3	49	609	3	32

THE WORK OF INSTRUCTORS—1931-1932—Continued

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THE OHIO STATE UNIVERSITY

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Evolution of Plants .....	...	...	...	...	...	...	...	...	...	611	5	9
General Morphology of Thallophytes and Bryophytes .....	...	...	...	613	5	12	...	...	...	...	...	...
General Morphology of the Pteridophytes and Spermatophytes .....	...	...	...	...	...	...	614	5	8	...	...	...
Plant Microchemistry .....	...	...	...	617	5	9	...	...	...	...	...	...
Economic Botany .....	...	...	...	619	5	7	...	...	...	...	...	...
Economic Botany .....	...	...	...	...	...	...	...	...	...	...	...	...
Physiological Methods	633	3	6	...	...	...	633	3	11	...	...	...
Plant Growth .....	...	...	...	...	...	...	...	...	...	634	3	13
Plant Genetics .....	...	...	...	...	...	...	...	...	...	635	5	13
Plant Cytology .....	...	...	...	...	...	...	...	...	...	...	...	...
Plant Anatomy .....	...	...	...	...	...	...	...	...	...	...	...	...
Experimental Plant Pathology .....	...	...	...	...	...	...	...	...	...	651	3	4
Mycology .....	...	...	...	...	...	...	653	5	9	...	...	...
Diseases of Fruit Crops .....	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Garden Crops .....	...	...	...	...	...	...	657	3	5	...	...	...
Freshwater Algae .....	...	...	...	...	...	...	...	...	...	...	...	...
Special Problems: Taxonomy, Morphology, Cytology and Anatomy	701	2-5	2 7	701	2-5	3	701	2-5	12	701	2-5	13
Special Problems: Physiology and Ecology	703	2-5	1 2	703	2-5	1	703	2-5	4	703	2-5	4
Special Problems: Pathology and Mycology .....	...	...	...	704	2-5	9	704	2-5	3	704	2-5	5
Research in Taxonomy and Morphology .....	...	...	...	801	3-10	2	...	...	...	801	3-10	3
Research in Physiology and Ecology	803	4-10	9 1	803	4-10	8	803	4-10	11	803	4-10	8
Research in Mycology and Plant Pathology .....	...	...	...	804	4-10	3	804	4-10	3	...	...	...
Research in Genetics .....	...	...	...	...	...	...	...	...	...	...	...	...
Research in Economic Botany .....	...	...	...	...	...	...	...	...	...	...	...	...
Botanical Seminary	810	1	7	810	1	16	810	1	10	810	1	11
Seminary in History of Botany .....	...	...	...	...	...	...	812	1	7	...	...	...
BUSINESS ORGANIZATION												
Introduction to Business .....	...	...	...	401	5	176	401	5	113	401	5	172
Business Communications and Adjustment Practice	604	3	40	604	3	69	604	3	92	604	3	112
Administrative Secretarial Duties	606	3	5	...	...	...	...	...	...	...	...	...
Business Statistics .....	...	...	...	...	...	...	614	3	29	...	...	...
Business Statistics .....	...	...	...	...	...	...	...	...	...	616	3	5
Public Aspects of Industry .....	...	...	...	...	...	...	620	1	263	...	...	...
Business Law: Contracts	621	3	35	621	3	109	621	3	145	621	3	97
Business Law for Engineers and Architects .....	...	...	...	622	3	32	622	3	26	622	3	16

Business Law: Agency and Sales.....	623	3	27	623	3	60	623	3	105	623	3	111
Business Law: Negotiable Instruments.....	623	3	27	625	3	50	625	3	55	625	3	95
Business Law: Partnerships and Corporations.....	627	3	48	627	3	48	627	3	48	627	3	48
Business Law: Legal Aspects of Credits and Corporations.....	629	3	42	629	3	42	629	3	42	629	3	42
Business Law: The Law of Banks and Banking.....	640	3	55	640	3	55	640	3	55	640	3	55
Corporate Organization and Control.....	642	3	14	642	3	14	642	3	14	642	3	14
Real Estate Principles and Finance.....	645	3	12	645	3	12	645	3	12	645	3	12
Trade Associations.....	650	5	45	650	5	93	650	5	127	650	5	113
Corporation Finance.....	653	3	26	653	3	7	653	3	21	653	3	64
Industrial Finance.....	656	3	14	656	3	14	656	3	21	656	3	21
Industrial Consolidations and Mergers.....	658	3	23	658	3	23	658	3	23	658	3	32
Railroad and Public Utility Finance.....	660	3	38	660	3	38	660	3	44	660	3	42
Investment Analysis.....	662	3	20	662	3	20	662	3	20	662	3	20
Principles of Investment.....	665	3	27	665	3	27	665	3	27	665	3	27
Investment Banking.....	666	1-3	4	667	1-3	4	667	1-3	4	668	1-3	2
The Stock Market.....	670	1-3	7	670	1-3	7	670	1-3	7	670	1-3	7
The Money Market.....	674	3	7	674	3	7	674	3	7	674	3	7
Foreign Exchange.....	680	5	27	680	5	95	680	5	81	680	5	57
Practice Work in Banking.....	684	3-6	17	684	3-6	17	684	3-6	9	684	3-6	4
Bank Organization and Management.....	685	3	8	685	3	13	685	3	19	685	3	21
Savings and Trust Institutions.....	686	3	24	686	3	24	686	3	17	686	3	21
Industrial Organization and Management.....	687	3	17	687	3	17	687	3	17	687	3	21
Industrial Management Field Work.....	691	3	13	691	3	13	691	3	13	691	3	13
Material Organization and Management.....	695	1-3	1	696	1-3	2	697	1-3	1	697	1-3	1
Personnel Organization and Management.....	700	5	25	700	5	119	700	5	90	700	5	90
Production Organization and Management.....	702	4	43	702	4	60	702	4	43	702	4	43
Office Organization and Management.....	705	4	53	705	4	50	705	4	53	705	4	53
Problems in Labor Management and Industrial Organization and Management.....	709	3	28	709	3	33	709	3	56	709	3	56
Marketing.....	712	4	77	712	4	68	712	4	77	712	4	77
Marketing Problems and Market Analysis.....	716	3	47	716	3	94	716	3	77	716	3	77
Retailing and Wholesaling.....	717	3	18	717	3	18	717	3	18	717	3	18
Retailing and Wholesaling.....	719	3	13	719	3	13	719	3	13	719	3	13
Credits and Collections.....	720	3	24	720	3	24	720	3	24	720	3	24
Salesmanship and Sales Management.....	721	3	21	721	3	21	721	3	21	721	3	21
Principles of Advertising.....	722	1-3	3	722	1-3	3	722	1-3	3	722	1-3	3
Advertising Practice.....	726	1-3	3	726	1-3	3	726	1-3	3	726	1-3	3
Retail Advertising.....	740	3	12	740	3	12	740	3	12	740	3	12
Exporting and Importing.....	745	3	8	745	3	8	745	3	8	745	3	8
Exporting and Importing.....	748	3	10	748	3	10	748	3	10	748	3	10
Thesis in Marketing and Advertising.....	752	3	12	752	3	12	752	3	12	752	3	12
Public Utility Organization and Administration.....	754	1-5	13	754	1-5	13	754	1-5	13	754	1-5	13
Ocean Transportation.....	760	3	18	760	3	18	760	3	18	760	3	18
Valuation of Railroad and Public Utilities.....	764	3	12	764	3	12	764	3	12	764	3	12
Traffic Management—Service Problems.....	769	1-3	1	769	1-3	1	769	1-3	1	769	1-3	1
Special Problems in Public Utilities.....	769	1-3	1	769	1-3	1	769	1-3	1	769	1-3	1
Personal Insurance.....	769	1-3	1	769	1-3	1	769	1-3	1	769	1-3	1
Property Insurance.....	769	1-3	1	769	1-3	1	769	1-3	1	769	1-3	1
Practice Work in Insurance.....	769	1-3	1	769	1-3	1	769	1-3	1	769	1-3	1

THE WORK OF INSTRUCTORS—1931-1932—Continued

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Research in Corporation Organization and Finance	801	1-6	4	801	1-6	3	802	1-6	4	803	1-6	5
Corporation Finance for Graduate Students .....	...	...	...	...	...	...	804	3	9	804	3	14
Research in Insurance .....	...	...	...	...	...	...	814	1-6	1	814	1-6	3
Marketing for Graduate Students	816	3	16	816	3	16	816	3	23	...	...	...
Research in Marketing, including Advertising and Sales	817	1-6	11	817	1-6	6	818	1-6	17	819	1-6	13
Problems of Banking and of Stock Prices	820	1-3	10	...	...	...	...	...	...	820	1-3	14
Research in Banking	821	1-6	6	821	1-6	10	822	1-6	9	823	1-6	4
Stock Market for Graduate Students .....	...	...	...	827	3	12	...	...	...	...	...	...
Graduate Seminary in Business Organization for Beginning Graduate Students	831	2	11	831	2	28	831	2	22	...	...	...
Graduate Seminary in Business Organization for Beginning Graduate Students .....	...	...	...	832	2	2	...	...	...	832	2	1
Graduate Course in Industrial Management	833	3	6	833	3	4	...	...	...	...	...	...
Application of Economic Theory in Industrial Organization and Management .....	...	...	...	...	...	...	...	...	...	834	3	12
Research in Industrial Management	835	1-6	3	835	1-6	3	836	1-6	3	837	1-6	4
Seminary in Corporation and Real Estate	840	3	7	...	...	...	...	...	...	...	...	...
Transportation and Public Utilities for Graduate Students .....	...	...	...	845	3	7	...	...	...	...	...	...
Research in Transportation and Public Utilities	846	1-6	2	846	1-6	2	...	...	...	846	1-6	1
CERAMIC ENGINEERING												
Occurrence and Properties of Clays .....	...	...	...	...	...	...	401	4	20	...	...	...
Winning, Preparation and Forming .....	...	...	...	...	...	...	...	...	...	405	4	19
Ceramic Laboratory .....	...	...	...	450	1	29	...	...	...	...	...	...
Theory of Drying .....	...	...	...	600	3	30	...	...	...	...	...	...
Drying and Burning .....	...	...	...	...	...	...	601	5	23	...	...	...
Elements of Ceramic Plant Engineering .....	...	...	...	...	...	...	603	5	23	...	...	...
Bodies, Glazes and Color .....	...	...	...	...	...	...	...	...	...	605	4	26
Refractories and Their Uses .....	...	...	...	...	...	...	...	...	...	610	5	23
Ceramic Calculations .....	...	...	...	615	5	32	...	...	...	...	...	...
Physical and Chemical Measurements of Clays and Other Ceramic Materials .....	...	...	...	...	...	...	620	5	25	...	...	...
Junior Inspection Trip .....	...	...	...	...	...	...	...	...	...	630	...	23
Laboratory in Stonework, Saggers and Terra Cotta .....	...	...	...	705	5	13	...	...	...	...	...	...
Laboratory in Whiteware .....	...	...	...	...	...	...	702	5	10	...	...	...
Laboratory in Ceramic Colors .....	...	...	...	...	...	...	...	...	...	703	5	7
Laboratory in Metal Enamels .....	...	...	...	...	...	...	...	...	...	704	5	11
Ceramic Designing .....	...	...	...	705	5	20	...	...	...	...	...	...

Ceramic Designing .....	...	...	...	...	...	706	5	19	...	...	...
Ceramic Designing .....	...	...	...	...	...	...	...	...	707	6	19
Technology of Glass .....	...	...	708	3	21	...	...	...	...	...	...
Thesis .....	...	...	710	3	2	710	3	14	710	3	1
Thesis .....	...	...	711	3	4	...	...	...	711	4	19
Laboratory in Refractories .....	...	...	721	5	9	...	...	...	...	...	...
Laboratory in Heavy Clay Wares .....	...	...	...	...	...	...	...	...	722	5	7
Senior Inspection Trip .....	...	...	...	...	...	...	...	...	730	...	18
Research Work .....	...	...	801	3-10	3	...	...	...	...	...	...
Research Work .....	...	...	...	...	...	802	3-10	9	...	...	...
Research Work .....	...	...	...	...	...	...	...	...	803	3-10	12
Porcelain for Electrical and other Special Purposes .....	...	...	810	2	4	...	...	...	...	...	...
Porcelain for Electrical and other Special Purposes .....	...	...	...	...	...	811	2	3	...	...	...
Porcelain for Electrical and other Special Purposes .....	...	...	...	...	...	...	...	...	812	2	5
CHEMICAL ENGINEERING											
Chemical Engineering Practice Work .....	...	...	501	5	65	...	...	...	...	...	...
Elements of Chemical Engineering	700	2	14	...	...	700	2	40	...	...	...
Industrial Chemistry .....	...	...	701	3	32	...	...	...	...	...	...
Industrial Chemistry	702	3	13	...	...	702	3	29	...	...	...
Inspection Trip to the West .....	...	...	...	...	...	...	...	...	704	...	55
Chemical Engineering and Industrial Chem- istry Laboratory .....	...	...	706	2-5	27	...	...	...	...	...	...
Engineering Chemistry and Chemical Engi- neering Laboratory	707	3	11	...	...	707	3	26	...	...	...
Applied Electrochemistry .....	...	...	...	...	...	...	...	...	710	3	10
Chemical Engineering Machinery Laboratory .....	...	...	712	2-6	6	...	...	...	...	...	...
Chemical Engineering Machinery Laboratory .....	...	...	...	...	...	713	2-6	6	...	...	...
Chemical Engineering Machinery Laboratory .....	...	...	...	...	...	...	...	...	714	2-6	7
Chemical Engineering Thesis .....	...	...	720	2	1	720	2	2	720	2	1
Chemical Engineering Thesis .....	...	...	721	5-6	2	721	5-6	19	721	5-6	18
Advanced Industrial Chemistry and Chemical Engineering	900	2-5	11	900	2-5	5	...	...	...	...	...
Advanced Industrial Chemistry and Chemical Engineering .....	...	...	...	...	...	901	2-5	3	...	...	...
Advanced Industrial Chemistry and Chemical Engineering .....	...	...	...	...	...	...	...	...	902	2-5	4
Seminary in Industrial Chemistry and Chem- ical Engineering	905	2	28	905	2	21	...	...	...	...	...
Seminary in Industrial Chemistry and Chem- ical Engineering .....	...	...	...	...	...	906	2	17	...	...	...
Seminary in Industrial Chemistry and Chem- ical Engineering .....	...	...	...	...	...	...	...	...	907	2	22
Industrial Chemistry and Chemical Engineer- ing Research	950	5-15	19	950	5-15	15	950	5-15	15	950	5-15
CHEMISTRY											
Elementary Chemistry	401	5	38	401	5	553	401	5	83	...	...
Elementary Chemistry	401	5	35	...	...	...	401	5	429	402	5
Qualitative Analysis	403	5	18	...	...	...	...	...	...	403	5

THE WORK OF INSTRUCTORS—1931-1932—Continued

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
General Chemistry	411	5	35	411	5	791	411	5	74	...	...	...
General Chemistry	412	5	29	...	...	...	412	5	711	412	5	71
Qualitative Analysis	413	5	27	...	...	...	...	...	...	413	5	456
Laboratory Technique .....	...	...	...	...	...	...	415	3	23	...	...	...
Quantitative Analysis .....	...	...	...	421	4	199	...	...	...	...	...	...
Quantitative Analysis	422	4	6	...	...	...	422	4	164	...	...	...
Quantitative Analysis .....	...	...	...	...	...	...	...	...	...	423	4	128
Problems in Quantitative Analysis .....	...	...	...	...	...	...	...	...	...	424	1	93
Organic Chemistry	451	5	34	451	5	233	...	...	...	...	...	...
Organic Chemistry	452	5	31	...	...	...	452	5	210	...	...	...
Quantitative Analysis	561	5	15	...	...	...	...	...	...	561	5	51
Physical Chemistry .....	...	...	...	...	...	...	...	...	...	563	5	87
Advanced Quantitative Analysis .....	...	...	...	621	4-5	11	...	...	...	...	...	...
General Quantitative Analysis	622	3	34	...	...	...	622	3	32	...	...	...
Gas Analysis .....	...	...	...	...	...	...	623	4-5	7	...	...	...
Advanced Qualitative Analysis .....	...	...	...	...	...	...	...	...	...	624	4-5	12
Water Analysis .....	...	...	...	...	...	...	...	...	...	625	5	17
Industrial Water Problems .....	...	...	...	...	...	...	627	3	12	...	...	...
Qualitative Organic Analysis	641	3	17	...	...	...	...	...	...	641	3	49
Quantitative Organic Analysis .....	...	...	...	...	...	...	...	...	...	642	3	9
Organic Chemistry	647	3	49	647	3	84	...	...	...	...	...	...
Organic Chemistry	648	3	38	...	...	...	648	3	77	...	...	...
Organic Chemistry-Laboratory	649	3	34	649	3	75	...	...	...	...	...	...
Organic Chemistry-Laboratory	650	3	26	...	...	...	650	3	43	...	...	...
Advanced Inorganic Chemistry .....	...	...	...	661	3	88	...	...	...	...	...	...
Advanced Inorganic Chemistry	662	3	86	...	...	...	662	3	65	...	...	...
The Rare Elements .....	...	...	...	...	...	...	...	...	...	663	3	29
The Ammonia System of Compounds .....	...	...	...	...	...	...	...	...	...	668	3	17
Inorganic Preparations	672	3	20	...	...	...	...	...	...	672	3	31
The Phase Rule .....	...	...	...	...	...	...	675	3	5	...	...	...
Physical Chemistry .....	...	...	...	680	3	32	...	...	...	...	...	...
Physical Chemistry .....	...	...	...	681	3	90	...	...	...	...	...	...
Physical Chemistry	682	3	17	...	...	...	682	3	72	...	...	...
Physical Chemistry .....	...	...	...	...	...	...	...	...	...	683	3	65
Physical Chemistry-Laboratory	691	2	8	691	2	38	...	...	...	...	...	...
Physical Chemistry-Laboratory	692	2	5	692	2	3	692	2	38	...	...	...
Physical Chemistry-Laboratory	693	2	13	693	2	9	693	2	4	693	2	17
Colloid Chemistry	695	3	56	...	...	...	695	3	18	...	...	...
Theoretical Electrochemistry .....	...	...	...	696	3	19	...	...	...	...	...	...
Electrochemistry-Laboratory .....	...	...	...	697	2	9	...	...	...	...	...	...

Colloid Chemistry-Laboratory	699	1-5	10	699	1-5	2	698	2	5	699	1-5	8
Minor Problems in Chemistry	782	1	22	...	...	...	782	1	37	...	...	...
Chemical Bibliography .....	...	...	...	...	...	...	...	...	...	783	1	48
Chemical Biography .....	...	...	...	830	3	35	...	...	...	...	...	...
Historical Chemistry .....	...	...	...	841	3	52	...	...	...	...	...	...
Advanced Organic Chemistry .....	...	...	...	...	...	...	842	3	50	...	...	...
Advanced Organic Chemistry .....	...	...	...	844	3-5	31	...	...	...	...	...	...
Advanced Organic Preparations-Laboratory .....	...	...	...	...	...	...	845	3-5	20	...	...	...
Advanced Organic Preparations-Laboratory .....	...	...	...	850	3	18	851	3	12	852	3	10
Seminary in Organic Chemistry	854	3	14	...	...	...	...	...	...	...	...	...
Seminary in Organic Chemistry	861-2-3	3-3-3	6	861	3	1	861	3	1	...	...	...
Physical Chemistry-Laboratory .....	...	...	...	...	...	...	865	2	11	...	...	...
Atomic Structure .....	...	...	...	...	...	...	866	2	13	...	...	...
Seminary in Inorganic Chemistry .....	...	...	...	867	2	3	...	...	...	...	...	...
Seminary in Inorganic Chemistry .....	...	...	...	881	3	18	...	...	...	...	...	...
Advanced Lectures in Physical Chemistry .....	...	...	...	...	...	...	882	3	16	...	...	...
Advanced Lectures in Physical Chemistry .....	...	...	...	...	...	...	...	...	...	888	3	10
Advanced Lectures in Physical Chemistry	891	3	37	...	...	...	891	3	4	...	...	...
Seminary in Physical Chemistry	950	5-15	34	950	5-15	60	950	5-15	63	950	5-15	56
Chemical Research .....	...	...	...	...	...	...	...	...	...	...	...	...

CIVIL ENGINEERING

Land Surveying .....	...	...	...	401	5	60	401	5	16	...	...	9
Plane Surveying .....	...	...	...	...	...	...	402	5	46	402	5	...
Railroad Surveying .....	...	...	...	403	5	5	...	...	...	403	5	40
Topographic Drawing .....	...	...	...	404	4	8	404	4	48	...	...	...
Applied Descriptive Geometry .....	...	...	...	...	...	...	...	...	...	405	4	43
Summer Surveying Camp	407	6	21	...	...	...	...	...	...	...	...	...
Elementary Surveying .....	...	...	...	411	3	60	...	...	...	411	3	86
Surveying .....	...	...	...	412	5	8	...	...	...	...	...	...
Topographic Surveying .....	...	...	...	601	5	38	...	...	...	...	...	...
Sanitary Engineering .....	...	...	...	602	5	48	...	...	...	...	...	...
Timber Construction .....	...	...	...	...	...	...	603	5	32	...	...	...
Stresses in Structures .....	...	...	...	...	...	...	...	...	...	604	5	41
Roads and Pavements .....	...	...	...	...	...	...	...	...	...	605	5	39
Cement and Concrete .....	...	...	...	...	...	...	606	3	24	606	3	32
Summer Surveying Camp	607	6	9	...	...	...	...	...	...	...	...	...
Precise Surveying .....	...	...	...	608	3	38	...	...	...	...	...	...
Adjustment of Observations .....	...	...	...	...	...	...	609	3	37	...	...	...
Timber and Masonry .....	...	...	...	...	...	...	611	3	44	...	...	...
Concrete Design .....	...	...	...	701	5	44	...	...	...	...	...	...
Bridge Design .....	...	...	...	702	5	43	...	...	...	...	...	...
Water Supply Engineering .....	...	...	...	...	...	...	703	5	42	...	...	...
Masonry Construction .....	...	...	...	...	...	...	704	5	40	...	...	...
Masonry Construction .....	...	...	...	...	...	...	...	...	...	705	5	37
Thesis .....	...	...	...	706	1	43	706	1	3	...	...	...
Thesis .....	...	...	...	707	2	2	707	2	38	...	...	...
Thesis .....	...	...	...	...	...	...	708	5	4	708	5	39
Trusses .....	...	...	...	712	5	20	712	5	15	712	5	16
Concrete Design .....	...	...	...	713	5	15	...	...	...	...	...	...
Steel-Frame Buildings	714	5	12
Contracts and Specifications	732	3	12
Tall Buildings	733	3	18

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COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Advanced Bridges	734	3	13	...	...	...
Advanced Bridges	735	3	8
Municipal Engineering	736	3	3	...	...	...	...	...	...
Highway Plans and Surveys	738	3	5	...	...	...	...	...	...
Bituminous Roads and Surfaces	739	3	4	...	...	...
Highway Design and Construction	741	3	6
Advanced Concrete	750	3	13	...	...	...
Research in Civil Engineering	801	...	5	...	...	...	801	...	6
Research in Civil Engineering	802	...	5	...	...	...	...	...	...
CLASSICAL LANGUAGES												
GREEK												
Elementary Greek	401	5	5	401	5	18	...	...	...	...	...	...
Elementary Greek	402	5	3	...	...	...	402	5	11	...	...	...
Plato	403	5	8
Homer	404	5	3	...	...	...	...	...	...
Reading and Lectures	601	3-5	1	601	3-5	1
Private Reading and Minor Problems	610	2-5	2	610	2-5	1	...	...	...
Principles of the Historical Study of Language	701	3	10
Historical Greek and Latin Grammar	720	3	7	...	...	...	...	...	...
Historical Greek and Latin Grammar	721	3	8	...	...	...
Historical Greek and Latin Grammar	722	3	7
LATIN												
Elementary Latin	401	5	11	...	...	...	...	...	...
Elementary Latin and Caesar	402	5	8	...	...	...
Caesar	403	5	8
Cicero's Orations	404	5	6	...	...	...	...	...	...
Vergil	405	5	6	...	...	...
Cicero, Horace, Ovid	406	5	28	...	...	...	...	...	...
Horace, Livy, Gellius	407	5	24	...	...	...
Latin Comedy	408	5	10	...	...	...	...	...	...	408	5	16
Sallust	409	5	2
Catullus, Pliny, Tacitus	451	3	11	...	...	...	...	...	...
Advanced Reading	453	3	8
Advanced Reading	454	3	11	...	...	...
Comparative Literature	506	3	12	...	...	...	...	...	...	506	3	20
Roman Private Life	507	3	16	...	...	...	...	...	...
Roman Art and Archaeology	508	3	21	...	...	...
Medical Latin	510	3	25
Latin Satire	602	3	7	...	...	...	...	...	...

Latin Prose Composition—First Course.....	...	...	...	...	...	612	3	4	...	...	...
Proseminary I.....	...	...	...	...	...	615	3	4	...	...	...
Proseminary, II.....	...	...	...	...	...	...	...	...	616	3	7
Roman Tragedy.....	...	...	621	3	6	...	...	...	...	...	...
Roman Epic.....	...	...	...	...	...	622	3	10	...	...	...
Advanced Reading Course in the Post- Augustan Epic.....	623	3	42	...	...	...	...	...	623	3	8
Advanced Prose Composition.....	625	3	10	625	3	2	...	...	...	...	...
Paleography.....	626	3	12	626	3	5	...	...	...	...	...
Vulgar Latin.....	...	...	...	...	...	627	3	6	...	...	...
Cicero's Political Philosophy.....	...	...	...	...	...	...	...	...	630	3	7
Private Reading and Minor Problems.....	...	...	631	2-5	3	631	2-5	5	631	2-5	3
Seminary in Latin Historiography.....	807	3	14	807	3	8	807	3	8	...	...
Seminary in the Latin Philosophical Writers.....	...	...	...	...	...	...	...	...	809	3	5
DAIRY TECHNOLOGY												
Principles of Dairying.....	...	...	401	5	48	401	5	35	401	5	24
Testing of Milk Products.....	...	...	403	5	6	...	...	...	403	5	13
Buttermaking.....	...	...	405	5	5	405	5	6	405	5	6
Soft Cheese Making.....	...	...	...	...	...	407	3	12	407	3	8
Dairy Mechanics.....	...	...	411	3	21	...	...	...	...	...	...
City Milk Inspection.....	...	...	...	...	...	...	...	...	412	3	29
Management of Dairy Plants.....	...	...	...	...	...	605	3	13	...	...	...
City Milk Supply.....	...	...	607	5	10	...	...	...	...	...	...
Hard Cheese Making.....	...	...	...	...	...	608	5	12	...	...	...
Milk Condensing.....	...	...	609	3	10	...	...	...	...	...	...
Ice Cream Making.....	...	...	610	5	8	...	...	...	...	...	...
Special Problems.....	...	...	701	3-15	4	701	3-15	5	701	3-15	6
Advanced Dairying.....	...	...	...	...	...	801	5-10	3	801	5-10	4
DISPENSARY CLINICS												
Dispensary Clinics.....	...	...	601	3	75	602	3	75	603	3	75
Dispensary Clinics.....	...	...	...	...	...	...	...	...	605	3	75
ECONOMICS												
Industrial History.....	400	5	8	400	5	217	400	5	163	400	5	186
Principles of Economics.....	401	5	85	401	5	395	401	5	320	401	5	186
Principles of Economics.....	402	5	69	402	5	165	402	5	298	402	5	296
Principles of Economics for Engineers.....	403	3	150	403	3	48
Principles of Economics for Engineers.....	404	3	97	404	3	42
Principles of Economics for Agricultural Students.....	405	5	36	405	5	42
Principles of Economics for Students in Home Economics.....	407	5	35	407	5	33	407	5	50
American Economic History.....	508	5	29
Outlines of Public Finance.....	509	5	8	509	5	36	509	5	33	509	5	42
Introduction to the Study of Labor Problems.....	510	3	32	510	3	36	510	3	54
Money and Banking.....	520	5	38	520	5	149	520	5	133	520	5	101
Elementary Economic Statistics.....	522	3	22	522	3	107	522	3	89	522	3	117
Principles and Problems of Economics.....	601	3	25	601	3	46
Principles and Problems of Economics.....	602	3	33
Principles and Problems of Economics.....	603	3	15
Financial History of the United States.....	607	3	5

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Financial History of the United States.....	...	...	...	...	...	...	608	3	7	...	...	...
Corporation Economics.....	...	...	...	616	5	18	...	...	...	...	...	...
Transportation Economics.....	618	5	25	618	5	85	618	5	88	618	5	61
Principles of Insurance.....	...	...	...	624	3	23	...	...	...	...	...	...
Forecasting and the Stabilization of Business.....	...	...	...	625	2	11	...	...	...	...	...	...
Forecasting and the Stabilization of Business.....	...	...	...	...	...	...	626	2	6	...	...	...
Public Finance.....	681-2-3	9	12	621	3	45	632	3	35	633	3	18
International Finance.....	...	...	...	634	3	13	...	...	...	...	...	...
International Finance.....	...	...	...	...	...	...	635	3	15	...	...	...
Industrial Development of Modern Europe.....	...	...	...	636	5	8	...	...	...	...	...	...
Industrial Relations.....	...	...	...	637	5	56	...	...	...	...	...	...
Labor Legislation.....	638	3	8	...	...	...	638	3	26	...	...	...
Social Insurance.....	...	...	...	...	...	...	...	...	...	639	3	19
Women in Industry.....	...	...	...	...	...	...	...	...	...	643	4	17
The Standard of Living.....	...	...	...	...	...	...	...	...	...	644	3	28
Principles of Economic Consumption.....	...	...	...	...	...	...	645	3	12	...	...	...
Public Utility Economics.....	...	...	...	648	5	22	...	...	...	...	...	...
International Commercial Policies.....	...	...	...	...	...	...	...	...	...	651	3	26
The Distribution of Wealth and Income.....	656	3	19	656	3	28	...	...	...	...	...	...
Socialism.....	...	...	...	...	...	...	...	...	...	657	3	32
Reading Course.....	...	...	...	700	3-5	2	700	3-5	2	700	3-5	2
History of Economic Thought.....	801	3	12	801	3	19	802	3	19	803	3	17
Economic History of the United States.....	...	...	...	804	3	10	805	3	3	806	3	6
Statistical Analysis.....	...	...	...	807	2	37	808	2	23	809	2	20
Economic History of Western Europe.....	...	...	...	812	2	9	813	2	8	814	2	14
Modern Economic Theories.....	...	...	...	816	3	29	...	...	...	...	...	...
Modern Economic Theories.....	...	...	...	...	...	...	817	3	19	818	3	13
French and German Economics.....	819	2	3	819	2	4	820	2	4	821	2	4
Advanced Money.....	...	...	...	863	3	17	...	...	...	...	...	...
Advanced Banking.....	...	...	...	...	...	...	864	3	13	...	...	...
Public Control of Industry.....	...	...	...	865	2	4	866	2	5	867	2	2
Problems of Capital Accumulation and Utili- zation.....	868	3	10	...	...	...	...	...	...	...	...	...
Capitalism and Communism in Europe and America.....	869	3	21	...	...	...	...	...	...	...	...	...
Economic Research.....	900	3-10	7	900	3-10	16	900	3-10	19	900	3-10	8
ELECTRICAL ENGINEERING												
Electrical Engineering Survey.....	601	5	9	461	1/2	92	...	...	...	601	5	23
Direct Current Equipment.....	601	5	9	601	5	27	...	...	...	...	...	...

Alternating Current Circuits and Equipment.....	605	5	9	605	5	22	605	5	22	...	...	...
Applied Electronics .....	...	...	...	607	3	24	607	3	32	...	...	...
Medium and High Frequency Currents.....	...	...	...	...	...	...	611	5	22	611	5	24
Audio Frequency Alternating Current Circuits and Measurements .....	...	...	...	612	4	7	...	...	...	...	...	...
Experience in Practice	625	5	35	...	...	...	...	...	...	...	...	...
Electrical Engineering .....	...	...	...	...	...	...	630	5	46	...	...	...
Electrical Equipment .....	...	...	...	...	...	...	...	...	...	635	3	19
Electrical Engineering .....	...	...	...	...	...	...	640	2	32	...	...	...
Electrical Engineering .....	...	...	...	...	...	...	...	...	...	641	5	30
Electrical Engineering Survey .....	...	...	...	661	$\frac{1}{2}$	48	...	...	...	...	...	...
Alternating Current Equipment .....	...	...	...	701	3	23	701	3	22	...	...	...
Alternating Current Equipment .....	...	...	...	702	3	17	702	3	20	...	...	...
Alternating Current Laboratory .....	...	...	...	705	4	22	705	4	17	...	...	...
Alternating Current Laboratory .....	...	...	...	706	4	17	706	4	20	...	...	...
Electrical Railways .....	...	...	...	710	4	6	...	...	...	...	...	...
Communication Engineering .....	...	...	...	716	4	40	...	...	...	...	...	...
Communication Engineering .....	...	...	...	...	...	...	717	4	34	...	...	...
Electrical Illumination .....	...	...	...	720	4	9	...	...	...	...	...	...
Electrical Illumination .....	...	...	...	722	3	23	...	...	...	...	...	...
Infra-red, Visible and Ultra-Violet Radiation and Its Applications .....	...	...	...	...	...	...	...	...	...	723	3	5
Advanced Electrical Communication .....	...	...	...	...	...	...	...	...	...	726	4	23
Electrical Design .....	...	...	...	...	...	...	730	4	9	...	...	...
Thesis .....	...	...	...	735	3	3	735	3	9	...	...	...
Thesis .....	...	...	...	...	...	...	...	...	...	736	3	12
Electrical Utilities Engineering .....	...	...	...	...	...	...	...	...	...	741	3	43
Electrical Transmission and Distribution.....	...	...	...	...	...	...	742	3	15	...	...	...
Advanced Electrical Engineering Laboratory..	...	...	...	...	...	...	...	...	...	746	4	7
Special Advanced Reading .....	...	...	...	...	...	...	761	...	15	...	...	...
Special Advanced Reading .....	...	...	...	...	...	...	...	...	...	762	...	10
Special Advanced Laboratory .....	...	...	...	...	...	...	766	...	3	...	...	...
Special Advanced Laboratory .....	...	...	...	...	...	...	...	...	...	767	...	5
The Application of Advanced Mathematics to Electrical Engineering Problems .....	...	...	...	...	...	...	...	...	...	770	3	12
Electrical Engineering .....	...	...	...	775	4	26	775	4	23	...	...	...
Electrical Engineering .....	...	...	...	776	4	27	776	4	13	...	...	...
Engineering Field Problems .....	...	...	...	...	...	...	...	...	...	780	2	12
Electrical Engineering Practice .....	...	...	...	...	...	...	783	$\frac{1}{2}$	38	...	...	...
Advanced Theoretical Study of Electrical Engi- neering Practice and Equipment.....	801	...	3	801	...	3	...	...	...	...	...	...
Advanced Theoretical Study of Electrical Engi- neering Practice and Equipment.....	...	...	...	...	...	...	802	...	14	...	...	...
Advanced Theoretical Study of Electrical Engi- neering Practice and Equipment.....	...	...	...	...	...	...	...	...	...	803	...	14
Advanced Laboratory Study of Electrical Engineering Equipment .....	...	...	...	805	...	3	...	...	...	...	...	...
Advanced Laboratory Study of Electrical Engineering Equipment	807	...	1
Research Work	811	...	4	811	...	7
Research Work	813	...	4

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
ENGINEERING DRAWING												
Principles of Engineering Drawing.....	401	4	14	401	4	431	401	4	72	...	...	...
Principles of Engineering Drawing.....	402	4	16	...	...	...	402	4	354	402	4	90
Descriptive Geometry	403	4	33	403	4	33	403	4	20	403	4	228
Descriptive Geometry .....	...	...	...	...	...	...	...	...	...	404	4	47
Principles of Engineering Drawing.....	...	...	...	411	4	51	...	...	...	...	...	...
Principles of Engineering Drawing.....	...	...	...	...	...	...	412	4	23	...	...	...
Descriptive Geometry .....	...	...	...	...	...	...	...	...	...	413	4	18
Drawing and Sketching .....	...	...	...	414	2	66	...	...	...	...	...	...
Descriptive Geometry .....	...	...	...	...	...	...	...	...	...	415	4	15
Elements of Drawing and Lettering.....	...	...	...	...	...	...	...	...	...	416	2	19
Engineering Drawing .....	...	...	...	421	3	127	...	...	...	...	...	...
Machine Drawing .....	...	...	...	...	...	...	422	3	127	...	...	...
Advanced Descriptive Geometry .....	...	...	...	424	4	50	424	4	9	...	...	...
Engineering Drawing .....	...	...	...	425	2	84	...	...	...	...	...	...
Technical Drawing .....	...	...	...	426	3	21	...	...	...	426	3	53
The Teaching of Engineering Drawing.....	...	...	...	...	...	...	436	5	13	...	...	...
Projection Drawing .....	...	...	...	...	...	...	437	2	54	...	...	...
House Planning .....	...	...	...	438	3	34	...	...	...	438	3	67
Drawing in Business .....	...	...	...	...	...	...	439	5	11	...	...	...
Chemical Machine Drawing .....	...	...	...	...	...	...	701	2	22	...	...	...
Chemical Plant Layout and Design.....	...	...	...	...	...	...	...	...	...	704	4	21
ENGLISH												
An Introduction to Literature..... (1-430)	333	2	42	...	...	...	...	...	...	...	...	...
An Introduction to Literature..... (2-430)	334	2	26	...	...	...	...	...	...	...	...	...
Shakespeare	335	2	24	...	...	...	...	...	...	...	...	...
Shakespeare	336	2	47	...	...	...	...	...	...	...	...	...
Tennyson	342	2	24	...	...	...	...	...	...	...	...	...
Browning	343	2	29	...	...	...	...	...	...	...	...	...
Composition and Reading	401	5	34	401	5	906	401	5	472	401	5	374
Composition and Reading .....	...	...	...	404	5	22	404	5	12	404	5	21
Theme Writing	405	5	16	405	5	50	405	5	30	405	5	34
English Composition .....	...	...	...	410	3	471	410	3	162	...	...	...
English Composition .....	...	...	...	...	...	...	411	3	465	411	3	136
English Composition .....	...	...	...	412	3	102	...	...	...	412	3	425
Advanced English for Engineers.....	...	...	...	419	3	66	419	3	44	419	3	75
Introduction to Literature	430	5	101	430	5	496	430	5	658	430	5	549
19th Century Poetry: Victorian	442	5	22	442	5	80	442	5	105	442	5	93

Shakespeare	450	5	49	450	5	147	450	5	146	450	5	187
Advanced Composition	...	...	...	507	5	27	...	...	...	...	...	...
English Word	...	...	...	528	3	48	...	...	...	528	3	23
The English Bible	...	...	...	...	...	...	...	...	...	529	5	76
Literature and Composition	...	...	...	...	...	...	...	...	...	543	5	20
18th Century Poetry and Prose.....(1-636)	337	2	24	...	...	...	...	...	...	...	...	...
Wordsworth and Coleridge.....(1-641)	340	2	23	...	...	...	...	...	...	...	...	...
Shelley and Keats.....(2-641)	341	2	12	...	...	...	...	...	...	...	...	...
19th Century Prose.....(1-644)	346	2	23	...	...	...	...	...	...	...	...	...
19th Century Prose.....(2-644)	347	2	9	...	...	...	...	...	...	...	...	...
American Literature	608	5	52	...	...	...	...	...	...	608	5	100
History of the English Language.....	...	...	...	...	...	...	627	3	31	...	...	...
18th Century Poetry and Prose.....	636	5	34	636	5	56	...	...	...	...	...	...
The Essay	...	...	...	...	...	...	639	5	33	...	...	...
19th Century Poetry: Romantic.....	641	5	24	641	5	38	641	5	67	641	5	42
19th Century Prose.....	644	5	24	644	5	30	...	...	...	644	5	35
Middle English	...	...	...	...	...	...	...	...	...	646	3	5
Old English	...	...	...	651	3	18	...	...	...	...	...	...
Old English Poetry	...	...	...	...	...	...	652	3	5	...	...	...
Chaucer and his Principal Contemporaries and Successors	...	...	...	...	...	...	653	5	28	...	...	...
English Medieval Literature to Chaucer	...	...	...	654	5	20	...	...	...	...	...	...
The Novel: Richardson to Scott.....	655	5	39	655	5	60	...	...	...	...	...	...
The Novel: Dickens to Meredith.....	...	...	...	...	...	...	656	5	109	...	...	...
Versification	...	...	...	...	...	...	...	...	...	657	5	15
The Short Story	...	...	...	...	...	...	658	5	50	...	...	...
Milton and Dryden	659	5	50	659	5	20	...	...	...	659	5	35
The Celtic Renaissance	...	...	...	...	...	...	...	...	...	664	5	13
Recent and Contemporary Drama.....	...	...	...	...	...	...	...	...	...	670	5	105
Spenser	...	...	...	...	...	...	674	5	50	...	...	...
Play Production	...	...	...	...	...	...	675	5	14	...	...	...
Shakespeare and His Contemporaries.....	676	5	50	676	5	54	...	...	...	...	...	...
Shakespeare and His Contemporaries.....	...	...	...	...	...	...	677	5	31	...	...	...
The Influence of the Theatre on the Drama..	...	...	...	...	...	...	...	...	...	680	3	47
Honors Course	...	...	...	705	3	4	...	...	...	...	...	...
Honors Course	...	...	...	...	...	...	706	3	1	707	3	3
Bibliography and Methods of Research in English Literature	800	2	16	...	...	...	...	...	...	...	...	...
History of the Short Narrative in English...	...	...	...	801	2	16	...	...	...	...	...	...
The Lyric	...	...	...	...	...	...	802	2	13	...	...	...
Studies in Criticism	...	...	...	805	2	10	...	...	...	805	2	4
Problems in Comedy	...	...	...	...	...	...	806	2	6	...	...	...
The Novel: End of the Nineteenth Century..	...	...	...	...	...	...	807	2	12	...	...	...
Poetry: End of the Nineteenth Century.....	...	...	...	808	2	6	...	...	...	...	...	...
The 20th Century Realistic Novel: Considered in Relation to its Origin, English and French.....	809	2	19	...	...	...	...	...	...	809	2	8
Studies in the Period of Chaucer.....	...	...	...	...	...	...	...	...	...	811	3	3
Studies in American Literature.....	814	2	13	...	...	...	...	...	...	814	2	12
Studies in Seventeenth Century Literature....	815	5	11	815	5	3	815	5	3	815	5	7
*Studies in the Romantic Movement.....	817	5	13	817	5	7	...	...	...	817	5	12
Discussion of Dissertations	819	2-5	5	819	2-5	18	819	2-5	5	819	2-5	8
Discussion of Dissertations	820	2-5	17	820	2-5	4	820	2-5	20	820	2-5	1

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Discussion of Dissertations	821	2-5	6	821	2-5	2	821	2-5	2	821	2-5	32
Play Writing	822	...	3
*Studies in 18th Century Literature.....	818	5	9	...	...	...
PUBLIC SPEAKING												
Principles and Practices of Public Speaking..	401	5	36	401	5	170	401	5	154	401	5	265
Debating	402	5	10	402	5	18	402	5	20	402	5	23
Principles and Practice of Oral Reading.....	459	3	18	459	3	19	459	3	39	...	...	...
Business and Professional Speaking.....	501	3	4	...	...	...	...	...	...
Advanced Debate Practice	610	5	2	610	5	16	...	...	...
Extempore Speaking	614	5	6	...	...	...
The Forms of Public Address	625	5	12
Special Problems in the Theory of Public Speaking	651	5	4
(COMMERCE) EXTENSION												
ACCOUNTING												
Elements of Accounting	401A	2	80	401A	2	24	...	...	...
Elements of Accounting	401B	2	72	401B	2	26
Elements of Accounting	401C	2	42
Advanced Principles of Accounting.....	601A	2	62	...	...	...	...	...	...
Advanced Principles of Accounting.....	601B	2	60	...	...	...
Advanced Principles of Accounting.....	601C	2	34
Income Tax Accounting	611A	2	113	...	...	...	...	...	...
Accounting Practice	613A	2	67	...	...	...
Accounting Practice	613B	2	66
BUSINESS ORGANIZATION												
Contracts, Law of	621A	2	85	...	...	...	...	...	...
Agency and Sales, Law of.....	623A	2	85	...	...	...
Negotiable Instruments, Law of	625A	2	63
Corporation Finance	650A	2	18	...	...	...	...	...	...
Corporation Finance	650B	2	18	...	...	...
Investment Analysis	657A	2	35
Principles of Investment	658A	2	54	...	...	...	...	...	...
Principles of Investment	658B	2	49	...	...	...
Bank Organization and Management.....	670A	2	17
Marketing Problems and Market Analysis....	702A	2	17
Salesmanship and Sales Management.....	712A	2	47	712A	2	65	...	...	...
Salesmanship and Sales Management.....	712B	2	41	712B	2	37
ECONOMICS												
Principles of Economics	401A	2	34	...	...	...	...	...	...

Principles of Economics	...	...	...	...	...	401B	2	30	401C	2	17
Principles of Economics	...	...	...	...	...	...	...	...	...	...	...
Money and Banking	...	...	...	...	...	520A	2	22	...	...	...
Money and Banking	...	...	...	...	...	...	...	...	...	...	...
Money and Banking	...	...	...	...	...	520B	2	22	...	...	...
FARM CROPS											
Field Crop Production	...	...	...	...	...	401	5	19	401	5	15
Cereal Crops	...	...	...	...	...	...	...	...	402	5	...
Forage Crops	...	...	...	...	...	...	...	...	...	...	...
Plant Breeding	...	...	...	...	...	...	...	...	403	5	22
Special Problems	...	...	...	...	...	...	...	...	602	5	4
Research in Plant Breeding and Crop Pro-	...	...	...	...	...	...	...	...	701	3-15	4
duction	...	...	...	...	...	...	...	...	701	3-15	4
Seminary	...	...	...	...	...	802	1	3	801	5-10	2
...	...	...	...	...	...	...	...	...	802	1	1
FINE ARTS											
Elementary Freehand Drawing	321	3	16	...	...	...	...	...	...	...	...
Advanced Freehand Drawing	323	3	3	...	...	...	...	...	...	...	...
Survey of Art	325	3	23	...	...	...	...	...	...	...	...
Elementary Design	331	3	3	...	...	...	...	...	...	...	...
Intermediate Design	332	3	14	...	...	...	...	...	...	...	...
Art Problems for Elementary Teachers	335	3	25	...	...	...	...	...	...	...	...
Art Problems for Teachers of Art	337	3	12	...	...	...	...	...	...	...	...
Elementary Ceramic Design	340	3	15	...	...	...	...	...	...	...	...
Water Color Painting	341	3	5	...	...	...	...	...	...	...	...
Freehand Drawing	...	...	...	...	...	401	2	24	...	...	...
Freehand Drawing	...	...	...	...	...	...	...	...	402	2	19
Freehand Drawing	...	...	...	...	...	...	...	...	...	...	...
Advanced Freehand Drawing	...	...	...	...	...	404	2	14	...	403	2
Advanced Freehand Drawing	...	...	...	...	...	...	...	...	...	...	9
Water Color Painting	...	...	...	...	...	405	2	13	...	...	...
Water Color Painting	...	...	...	...	...	...	...	...	...	...	...
Drawing from Life	...	...	...	...	...	407	2	11	...	407	2
Drawing from Life	...	...	...	...	...	408	3	23	...	408	3
Elementary Freehand Drawing	421	5	9	...	...	411	3	3	...	411	3
Advanced Freehand Drawing	423	5	6	...	...	412	3	1	...	412	3
Drawing from Life	...	...	...	...	...	421	5	100	...	421	5
Advanced Freehand Drawing	...	...	...	...	...	423	5	16	...	423	5
Drawing from Life	...	...	...	...	...	424	5	21	...	424	5
Advanced Life Drawing	...	...	...	...	...	425	5	15	...	425	5
Elements of Arts	...	...	...	...	...	426	5	136	...	426	5
Elementary Design	431	5	7	...	...	431	5	30	...	431	5
Intermediate Design	...	...	...	...	...	432	5	12	...	432	5
Elements of Arts: Advanced	...	...	...	...	...	436	3	28	...	436	3
Water Color Painting	441	5	13	...	...	441	5	18	...	441	5
Oil Painting	...	...	...	...	...	442	5	10	...	442	5
History of Ancient Art	...	...	...	...	...	451	5	98	...	451	5
History of Medieval and Renaissance Art	...	...	...	...	...	...	...	...	...	...	...
History of Renaissance and Modern Art	...	...	...	...	...	452	5	80	...	452	5
History of Costume Design	...	...	...	...	...	...	...	...	...	453	5
Sculpture	...	...	...	...	...	461	5	12	...	461	5
Appreciation of Plastic Arts	...	...	...	...	...	476	1	164	...	476	1
Appreciation of the Pictorial Arts	477	1
Appreciation of the Popular Arts	478	1

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Non-Professional Course in Landscape Architecture	500	2	9	500	2	11	500	2	22
Theory of Landscape Design	509	2	19	...	...	...	...	...	...
Theory of Landscape Design	510	2	13	...	...	...
Elementary Landscape Design	511	2	12
Elementary Landscape Design	512	3	11	...	...	...	...	...	...
Elementary Landscape Design	513	3	10	...	...	...
Elementary Landscape Design	514	3	7
Intermediate Landscape Design	515	5	11	...	...	...	...	...	...
Intermediate Landscape Design	516	5	12	...	...	...
Intermediate Landscape Design	517	5	8
Advanced Landscape Design	518	8	14	...	...	...	...	...	...
Advanced Landscape Design	519	8	13	...	...	...
Advanced Landscape Design	520	8	14
Plant Materials	521	2	9	...	...	...	...	...	...
Plant Materials	522	2	10	...	...	...
Plant Materials	523	2	9
Plant Materials	524	2	9	...	...	...	...	...	...
Plant Materials	525	2	10	...	...	...
Plant Materials	526	2	10
History of Landscape Architecture	530	3	9	...	...	...	...	...	...
Commercial Design	533	5	11	...	...	...
Thesis Design	534	5	5	534	5	10	534	5	15
Illustrative Drawing	535	5	11	...	...	...	535	5	13
Planting Design	541	3	13	...	...	...	...	...	...
Planting Design	542	3	13	...	...	...
Planting Design	543	3	14
Advanced Water Color Painting	544	5	7	544	5	5	...	...	...	544	5	3
Portrait Painting	545	5	2	...	...	...	...	...	...
Portrait Painting	546	5	7	...	...	...
Portrait Painting	547	5	12
Stage Design	550	5	11
Landscape Construction	551	5	13	...	...	...	...	...	...
Landscape Construction	552	5	13	...	...	...
Landscape Construction	553	5	14
Advanced Oil Painting	560	5	4	560	5	8	560	5	10
Advanced Sculpture	562	5	2	562	5	5	562	5	2
Technical Problems	565	3-5	1	565	3-5	16
Technical Problems	566	3-5	42
Technical Problems	567	3-5	75

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Research in the Geography of Conservation and Land Utilization.....	808	1-3	1
Research in the Geography of Conservation and Land Utilization.....	809	1-3	2	809	1-3	1
Research in the Geography of Conservation and Land Utilization.....	819	1-3	2
History of Geography.....	811	2	4
Research in Physical Geography.....	831	1-3	1	...	...	...	...	...	...	...	...	...
Research in Physical Geography.....	832	1-3	1	...	...	...	...	...	...	...	...	...
Seminary in Geography.....	843	5	1
GEOLOGY												
General Geology	401	5	214	401	5	155	401	5	95
General Geology	402	5	57	402	5	136	402	5	124
Glacial Geology	404	5	5
The Geology of Our Mineral Wealth.....	411	5	7	...	...	...	...	...	...
Geologic Life Development.....	412	5	9
Meteorology	420	5	10
Agricultural Geology	430	5	26	...	...	...	430	5	51
Engineering Geology	435	5	48	435	5	34	...	...	...
Historical Geology for Engineers.....	437	3	8	...	...	...
Advanced General Geology: Physiography....	501	5	8	...	...	...	...	...	...
Adv. General Geology: Structural and Dynamic	502	5	9	...	...	...
Advanced General Geology: Historical.....	503	5	3
Advanced Paleontology	601	3-4	2	601	3-4	1	...	...	...
Advanced Paleontology	602	3-4	1	...	...	...
Advanced Paleontology	603	3-4	3
Economic Geology: Metals.....	605	5	13	...	...	...	...	...	...
Economic Geology: Non-Metals.....	606	5	5	...	...	...
Economic Geology: Petroleum.....	607	5	7
Stratigraphic Geology of Ohio.....	608	5	8	...	...	...	...	...	...
Petrology	609	5	12	...	...	...
Special Problems	612	5	1
Geological Surveying	615	5	6
Clays	616	5	12	...	...	...
Introductory Paleontology	620	3	10	...	...	...	...	...	...
Introductory Paleontology	621	3	10	...	...	...
Introductory Paleontology	622	3	8
Micro-Paleontology	623	3	3
Field Geology	627	8	10	...	...	...	...	...	...	...	...	...

Paleobotany .....	...	...	...	...	...	630	4	5	...	...	...
Microscopic Study of the Opaque Ore Minerals .....	...	...	...	...	...	...	...	...	632	3	4
Research .....	...	...	804	3-5	1	804	3-5	1	804	3-5	2
Geology of the Eastern United States .....	...	...	...	...	...	810	3	4	...	...	...
Geology of the Western United States .....	...	...	...	...	...	...	...	...	811	3	4
Seminary in Metamorphic Geology .....	...	...	815	2	1	...	...	...	...	...	...
GERMAN											
Modern Novel: etc. (1st half 441)	341	1	11	...	...	...	...	...	...	...	...
Franz Grillparzer	380	1	3	...	...	...	...	...	...	...	...
Elementary German	401	5	29	401	5	299	401	5	93	401	5
Elementary German	402	5	13	402	5	43	402	5	222	402	5
Intermediate German .....	...	...	...	403	5	70	403	5	30	403	5
Easy Classical Reading .....	...	...	...	404	5	63	404	5	47	404	5
Science Reading .....	...	...	...	406	5	46	...	...	...	406	5
Elementary Composition	407	2	9	407	2	18	407	2	25	...	...
Elementary Composition .....	...	...	...	408	2	5	408	2	11	408	2
Contemporary Novel: etc. ....	...	...	...	433	3	24	...	...	...	...	...
19th Century Novel: etc. ....	...	...	...	...	...	...	434	3	41	...	...
Modern Drama: etc.	443	3	23	...	...	...	...	...	...	...	...
Contemporary Drama: etc. ....	...	...	...	...	...	...	...	...	...	444	3
Elementary Course in the Reading of German	501	3	41	501	3	58	...	...	...	...	30
Goethe .....	...	...	...	615	3	13	616	3	14	617	3
Franz Grillparzer—Life and Works	633	3	8	...	...	...	...	...	...	...	13
German Phonetics .....	...	...	...	655	3	12	...	...	...	...	...
Advanced Composition .....	...	...	...	...	...	...	...	...	...	685	3
Minor Investigations	695	3	7	695	3	10	695	3	13	695	3
Gothic .....	...	...	...	...	...	...	805	3	7	...	...
Old High German .....	...	...	...	...	...	...	...	...	...	810	3
Seminary in German Literature .....	...	...	...	855	3	8	856	3	7	857	3
Seminary in German Literature	858	3	6	...	...	...	...	...	...	...	7
HISTORY											
Modern European History to 1815	401	5	44	401	5	402	401	5	128	401	5
Modern Europe since 1815 .....	...	...	...	402	5	131	402	5	292	402	5
History of the United States (1763-1850) .....	...	...	...	403	5	354	403	5	240	403	5
History of the United States (1850-1925) .....	...	...	...	404	5	139	404	5	254	404	5
History of the United States (1850-1925)	406	5	49	...	...	...	...	...	...	...	223
Medieval Europe (400-1500) .....	...	...	...	407	5	19	...	...	...	...	...
Outline of the History of Western Civilization .....	...	...	...	408	5	32	...	...	...	...	...
Outline of the History of Western Civilization .....	...	...	...	...	...	...	409	5	36	...	...
Outline of the History of Western Civilization .....	...	...	...	...	...	...	...	...	...	410	5
England to 1603 .....	...	...	...	421	5	31	...	...	...	...	39
England since 1603 .....	...	...	...	...	...	...	422	5	34	...	...
The History of Ohio	437	3	51	...	...	...	...	...	...	437	3
The Renaissance .....	...	...	...	607	3	39	...	...	...	...	100
The Reformation	608	3	73	...	...	...	608	3	28	...	...
The Roman Empire, Period of the Principate	609	3	14	609	3	8	...	...	...	...	...
The Late Roman Empire .....	...	...	...	...	...	...	610	3	7	...	...
Constitutional History of England to 1485 .....	...	...	...	611	3	30	...	...	...	...	...
Constitutional History of England since 1485	612	3	28
England in the Tudor Period	613	3
England in the Stuart Period	614	3

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Expansion of Europe to 1588.....	621	3	19
Expansion of Europe from 1588 to 1815.....	622	3	41
Expansion of Europe from 1815 to Present.....	623	3	30	...	...	...	...	...	...	623	3	42
The French Revolution and Napoleon.....	...	...	...	624	3	16	...	...	...	...	...	...
The Third French Republic.....	...	...	...	...	...	...	...	...	...	625	3	10
The Reconstruction of Europe (1919-1926)...	...	...	...	...	...	...	628	3	27	...	...	...
Modern Germany (1789-1918).....	629	3	55	...	...	...	629	3	30	...	...	...
The Diplomacy of Europe (1878-1919).....	630	3	21	630	3	34	...	...	...	...	...	...
Constitutional History of the United States to 1837.....	...	...	...	...	...	...	631	3	7	...	...	...
Constitutional History of the United States since 1837.....	632	3	28	...	...	...	...	...	...	632	3	20
The Slavery Controversy in the United States.....	633	3	90	633	3	33	...	...	...	...	...	...
Reconstruction and the New South (1863-1925).....	634	3	59	...	...	...	634	3	37	...	...	...
American Diplomacy to the Close of Civil War.....	...	...	...	635	3	24	...	...	...	...	...	...
American Diplomacy since the Civil War.....	...	...	...	...	...	...	636	3	47	...	...	...
Recent History of United States (1875-1930).....	...	...	...	637	3	60	...	...	...	...	...	...
The Influence of Immigrant Groups upon United States History.....	...	...	...	...	...	...	...	...	...	639	5	39
The Pioneer in American History to 1812.....	640	3	46	...	...	...	...	...	...	640	3	18
The Pioneer in American History since 1812.....	...	...	...	...	...	...	641	3	22	...	...	...
Political Parties in the United States.....	643	5	48	...	...	...	643	5	26	...	...	...
The Colonization of North America.....	644	3	48	644	3	25	...	...	...	...	...	...
Colonial Latin America.....	...	...	...	...	...	...	645	3	17	...	...	...
The Latin-American Republics.....	...	...	...	...	...	...	...	...	...	646	5	26
History of Canada.....	...	...	...	...	...	...	...	...	...	647	5	36
The Ancient History of the Near East.....	653	3	40	...	...	...	...	...	...	...	...	...
The Age of the Crusades.....	...	...	...	...	...	...	...	...	...	654	3	10
Greek History.....	655	5	19	655	5	22	...	...	...	...	...	...
Roman History.....	...	...	...	...	...	...	656	5	21	...	...	...
The Russian Revolutionary Period.....	675	3	58	...	...	...	...	...	...	...	...	...
The History of the Balkan Peninsula since 1800.....	...	...	...	...	...	...	...	...	...	673	3	22
Honors Courses.....	...	...	...	...	...	...	705-6-7-	3-5	3	705-6-7-	3-5	2
Introduction to Historical Research.....	812	3	42	812	3	21	812	3	4	...	...	...
The Great Historians to the 19th Century.....	...	...	...	...	...	...	813	3	9	...	...	...
The Great Historians of the 19th Century.....	...	...	...	...	...	...	...	...	...	814	3	14
Seminary in European History.....	815	3	9	815	3	9	...	...	...	...	...	...
Seminary in European History.....	...	...	...	...	...	...	816	3	7	...	...	...
Seminary in European History.....	...	...	...	...	...	...	...	...	...	817	3	21
Seminary in American History.....	819	3	32	819	3	18	...	...	...	...	...	...

Seminary in American History.....	...	...	...	...	...	...	820	3	20	...	821	...	3	5
Seminary in American History.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HISTORY OF EDUCATION														
History of Elementary Education.....	401	5	44	401	5	41	401	5	47	401	5	29	...	...
Educational Classics (1st half-602).....	352	2	8	...	...	...	...	...	...	...	...	...	...	...
Educational Classics (2nd half-602).....	353	2	5	...	...	...	...	...	...	...	...	...	...	...
History of Education in the United States since 1860 (1st half-606).....	358	2	7	...	...	...	...	...	...	...	...	...	...	...
History of Education in the United States since 1860 (2nd half-606).....	359	2	4	...	...	...	...	...	...	...	...	...	...	...
Educational Classics .....	...	...	...	...	...	...	601	4	4	...	...	...	...	...
Educational Classics .....	...	...	...	...	...	...	...	...	...	602	4	5	...	...
History of Education in the U. S. to 1860.....	...	...	...	605	4	5	...	...	...	...	...	...	...	...
History of Education in the U. S. since 1860.....	...	...	...	...	...	...	...	...	...	606	4	8	...	...
History of Industrial Education.....	607	2	10	...	...	...	607	2	5	...	...	...	...	...
History of the American High School.....	608	2	8	608	2	21	...	...	...	...	...	...	...	...
Present-Day Problems in Education, II.....	...	...	...	...	...	...	...	...	...	610	2	5	...	...
The History of Education in Ohio.....	611	2	10	611	2	5	...	...	...	...	...	...	...	...
Comparative Education	613	2	7	...	...	...	613	2	9	...	...	...	...	...
Comparative Education .....	...	...	...	...	...	...	...	...	...	614	2	6	...	...
Great Teachers .....	...	...	...	...	...	...	...	...	...	617	2	14	...	...
The History of Higher Education.....	...	...	...	620	2	4	...	...	...	...	...	...	...	...
The Influence of the Natural Sciences on Edu.....	621	2	4	...	...	...	...	...	...	...	...	...	...	...
The History of Modern Education to 1750.....	625	3	49	625	3	159	625	3	91	625	3	83	...	...
The History of Modern Education since 1750.....	626	3	63	626	3	79	626	3	141	626	3	84	...	...
History of Western Education.....	630	3	18	...	...	...	...	...	...	...	...	...	...	...
Rousseau and Modern Education.....	640	2	18	...	...	...	...	...	...	...	...	...	...	...
Minor Problems	651	1-3	5	651	1-3	3	...	...	...	651	1-3	2	...	...
Seminary in the History of Education.....	801	2-5	11	801	2-5	3	801	2-5	1	...	...	...	...	...
Research in the History of Education.....	809	3-5	2	809	3-5	3	...	...	...	...	...	...	...	...

HOME ECONOMICS														
An Introduction to Home Economics.....	...	...	...	400	1	133	400	1	18	...	...	...	...	...
Textiles and Clothing.....	...	...	...	401	5	55	401	5	69	401	5	37	...	...
Clothing .....	...	...	...	...	...	...	402	5	37	402	5	76	...	...
Textiles and Clothing.....	404	5	36	...	...	...	404	5	27	...	...	...	...	...
Household Engineering	406	5	57	...	...	...	406	5	45	406	5	53	...	...
Foods .....	...	...	...	411	5	63	411	5	30	411	5	19	...	...
Foods .....	...	...	...	412	5	7	412	5	28	412	5	36	...	...
Elementary Dietetics .....	...	...	...	...	...	...	...	...	...	425	2	62	...	...
Diet in Disease.....	...	...	...	426	1	32	...	...	...	...	...	...	...	...
Clothing .....	...	...	...	503	5	19	503	5	33	503	5	22	...	...
Applied Costume Design.....	504	3	14	...	...	...	504	3	17	...	...	...	...	...
Elements of Nutrition	509	3	8	...	...	...	509	3	10	...	...	...	...	...
Elements of Nutrition and Food Preparation.....	510	5	32	...	...	...	510	5	29	...	...	...	...	...
Home Hygiene .....	...	...	...	511	3	44	511	3	41	511	3	36	...	...
House Furnishing	512	5	12	512	5	31	512	5	17	512	5	35	...	...
Elements of Homemaking.....	...	...	...	518	5	20	...	...	...	518	5	41	...	...
The Child in the Home.....	520	3	23	520	3	18	...	...	...	520	3	17	...	...
Clothing	601	3	16	601	3	10	601	3	16	601	3	14
Textiles	602	3	18	602	3	5
Textiles	603	3	25	603	3	9

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Textiles and Clothing.....	604	5	16
Nutrition	611	5	30	611	5	25	611	5	22	611	5	32
Foods	614	3	21	614	3	18	614	3	17
Experimental Work in Food Preparation.....	615	5	10	...	...	...	615	5	4	...	...	...
Nutrition of Infants and Children.....	616	3	13	...	...	...	...	...	...	...	...	...
The Purchase of Clothing and Household Furnishings	618	5	14	618	5	19	...	...	...	...	...	...
Household Equipment	619	3	4	...	...	...	...	...	...	619	3	5
Child Development	621	5	28	621	5	25	621	5	27	621	5	29
Principles of Home Management .....	...	...	...	626	3	17	626	3	30	626	3	31
Laboratory in Home Management .....	...	...	...	627	5	13	627	5	23	627	5	24
The Purchase of Foods for Institutions.....	...	...	...	630	5	10	630	5	9	...	...	...
Institution Management .....	...	...	...	631	5	10	631	5	9	...	...	...
Institution Management .....	...	...	...	...	...	...	632	5	4	632	5	14
School Lunchroom Management.....	633	3	11	...	...	...	...	...	...	633	3	20
Home Economics Teaching.....	...	...	...	641	5	19	641	5	14	641	5	17
Supervised Home Economics Teaching.....	...	...	...	642	5	9	642	5	14	642	5	26
Problems in the Teaching of Home Economics .....	...	...	...	643	3	9	643	3	14	643	3	34
Problems in the Teaching of Home Economics	644	3	17	...	...	...	...	...	...	...	...	...
Vocational Home Econ. in Secondary Schools	645	3	7	...	...	...	...	...	...	...	...	...
Special Problems in Home Economics.....	701	3-15	26	701	3-15	17	701	3-15	16	701	3-15	13
Advanced Special Problems in Home Econ.....	801	3-15	3	...	...	...	801	3-15	4	801	3-15	5
Seminary in Home Economics Teaching.....	802	3-5	2	...	...	...	...	...	...	...	...	...
HORTICULTURE & FORESTRY												
Principles of Horticulture.....	...	...	...	401	5	40	...	...	...	...	...	...
Small Fruits and Grapes.....	...	...	...	...	...	...	...	...	...	402	5	7
Elementary Pomology .....	...	...	...	403	5	6	...	...	...	...	...	...
Elementary Pomology .....	...	...	...	...	...	...	404	5	3	...	...	...
General Horticulture .....	...	...	...	405	5	39	...	...	...	405	5	51
Commercial Vegetable Gardening.....	...	...	...	...	...	...	421	5	12	...	...	...
Commercial Vegetable Gardening.....	...	...	...	...	...	...	...	...	...	422	5	9
Horticultural Products .....	...	...	...	423	3	5	...	...	...	...	...	...
Greenhouse Construction and Equipment.....	...	...	...	...	...	...	...	...	...	424	3	7
Vegetable Forcing .....	...	...	...	...	...	...	...	...	...	426	3	6
Potato Culture .....	...	...	...	...	...	...	...	...	...	428	3	19
Elementary Plant Propagation.....	...	...	...	440	3	8	...	...	...	...	...	...
Amateur Floriculture .....	...	...	...	...	...	...	...	...	...	441	3	6
Greenhouse Cutflower Crops.....	...	...	...	442	5	14	...	...	...	...	...	...
Greenhouse Pot Plants.....	...	...	...	...	...	...	443	5	9	...	...	...

Garden Management .....	...	...	...	...	...	...	445	5	8	444	5	16
Garden Arrangement .....	...	...	...	...	...	...	...	...	...	446	3	7
The Flower Shop .....	...	...	...	...	...	...	...	...	...	448	5	4
Nursery Management .....	...	...	...	...	...	...	449	5	6	...	...	...
Advanced Plant Propagation .....	...	...	...	...	...	...	...	...	...	...	...	...
Ornamental Plants .....	...	...	450	5	10	...	...	...	...	...	...	...
Arboriculture .....	...	...	483	3	7	...	...	...	...	...	...	...
General Forestry .....	...	...	501	5	21	...	...	...	...	...	...	...
Principles of Forestry .....	...	...	...	...	...	505	5	11	...	...	...	...
Wood Technology .....	...	...	...	...	...	507	5	11	...	...	...	...
Dendrology .....	...	...	508	5	8	...	...	...	...	509	5	11
Artificial Forest Reproduction .....	...	...	...	...	...	...	...	...	...	...	...	...
Horticultural Plant Breeding .....	...	...	...	...	...	601	3	7	...	...	...	...
Experimental Horticulture .....	...	...	602	3	14	...	...	...	...	...	...	...
Experimental Horticulture .....	...	...	...	...	...	603	3	15	...	...	...	...
Systematic Pomology .....	...	...	604	5	4	...	...	...	...	...	...	...
The Literature of Horticulture .....	...	...	...	...	...	605	5	6	...	...	...	...
Advanced Pomology .....	...	...	606	5	8	...	...	...	...	...	...	...
Systematic Vegetable Gardening .....	...	...	621	5	5	...	...	...	...	...	...	...
Structure of Vegetables & Ornamental Plants .....	...	...	652	3	8	...	...	...	...	...	...	...
Structure of Economic Fruits .....	...	...	...	...	...	653	3	11	...	...	...	...
Minor Investigations .....	...	...	701	3-15	26	701	3-15	14	701	3-15	12	12
Horticulture Seminary .....	...	...	704	1	12	704	1	13	704	1	12	12
Research .....	...	...	801	5-10	4	801	5-10	5	801	5-10	5	5

INDUSTRIAL ENGINEERING

Survey of Industrial Engineering .....	...	...	...	401	½	12	...	½	19	...	...	...
Survey of Industrial Engineering .....	...	...	...	...	...	...	402	...	...	...	...	...
Survey of Industrial Engineering .....	...	...	...	...	...	...	...	...	...	403	½	20
Foundry Practice .....	...	...	405	3	79	...	405	3	40	405	3	36
Advanced Foundry Practice .....	...	...	...	...	...	...	406	2	3	406	2	16
Metal Bench Work .....	...	...	407	2	77	...	407	2	21	407	2	23
Millwrighting .....	...	...	408	2	18	...	408	2	71	408	2	23
Patternmaking	411	3	46	40	411	3	48	3	49	...	...	...
Forging and Heat Treating	415	3	33	27	415	3	40	3	38	...	...	...
Advanced Forging and Heat Treating .....	...	...	...	...	417	2	11	2	11	...	...	...
Forging, Shop Heat Treating and Welding	418	3	23	14	418	3	34	3	13	...	...	...
Elementary Machine Work	419	3	49	...	419	3	52	3	70	419	3	47
Advanced Machine Work	421	3	28	...	421	3	27	3	38	421	3	53
Engineering Organization .....	...	...	...	601	4	43	...	...	...	...	...	...
The Laws of Engineering Management .....	...	...	...	...	...	...	602	3	48	...	...	...
Work Analysis .....	...	...	...	...	...	...	...	...	...	603	3	46
Advanced Machine Work	623	3	10	623	3	11	623	3	15	623	3	12
Inspection Trip .....	...	...	...	...	...	...	...	...	...	630	...	35
Work-Analysis Laboratory .....	...	...	...	...	...	...	...	...	...	653	2	39
Selection of Manufacturing Equipment .....	...	...	...	701	3	41	...	...	...	...	...	...
Work Routing .....	...	...	...	...	...	...	702	4	44	...	...	...
Production Mathematics .....	...	...	...	...	...	...	704	4	21	704	4	16
Methods of Waste Elimination .....	...	...	...	...	...	...	...	...	...	706	4	45
Principles of Industrial Engineering	712	3	40	712	3	60
Inspection Trip	730	...	27
Tools, Jigs, and Fixtures	751	3	31

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Work-Routing Laboratory	752	3	43
Thesis	754	3-12	4	754	3-12	2	754	3-12	8
JOURNALISM												
News-Collecting and News-Writing	401	5	7	401	5	84	401	5	50	401	5	29
News-Collecting and News-Writing	402	5	11	402	5	52	402	5	31
Agricultural Journalism	407	3	21	...	...	...	407	3	36
Agricultural Journalism	408	3	6	...	...	...
Agricultural Editing	409	1	5
Copyreading	501	3	8	501	3	22	...	...	...	501	3	46
Feature Writing	502	3	8	...	...	...	502	3	36	502	3	10
Newspaper Ethics and Principles	513	3	27	...	...	...	513	3	25
Newspaper Law	514	3	20	...	...	...	514	3	32
Newspaper History and Comparative Journal- ism	517	5	45	...	...	...
Newspaper Organization	518	5	28	...	...	...	518	5	27
The Community Paper, Weekly and Daily....	525	3	17	...	...	...
The Newspaper Business Office	526	3	11	...	...	...	526	3	34
Newspaper Problems	607	2	27	...	...	...	607	2	14
Newspaper Problems	608	2	6	...	...	...	608	2	43	...	...	...
Editorial Writing	621	3	25	...	...	...	621	3	17
Public Opinion in the Making	622	3	46	...	...	...
LAW												
Agency	2	91	...	3	89
Contracts	5	105	...	4	86	...	2	88
Civil Procedure	4	107	...	2	92	...	...	...
Torts	4	110	...	2	98	...	3	92
Equity I	4	94
Personal Property	3	105	...	...	...	...	2	87
Real Property I	4	92	...	4	91
Wills and Administration
Bills and Notes	4	85	...	...	...
Code Pleading	4	84	...	...	...	...	...	...
Suretyship	3	40	...	...	...
Sales	4	102
Real Property II
Evidence	2	87	...	2	82	...	2	80
Debtors' Estates	22	...	...	21
Domestic Relations	3	78	...	...	...	...	...	...

Equity II .....	...	...	...	4	83	...	...	...	...	...
Mortgages .....	...	...	...	...	...	3	59	...	...	...
Public Utilities .....	...	...	...	4	11	...	...	...	...	...
Quasi Contracts .....	...	...	...	3	53	...	...	...	...	...
Appellate Practice .....	...	...	...	...	...	3	27	...	...	...
Criminal Law .....	...	...	...	...	...	5	79	...	...	...
Criminal Procedure .....	...	...	...	...	...	...	...	...	2	34
Conflict of Laws .....	...	...	...	2	31	2	32	...	2	31
Constitutional Law .....	...	...	...	4	71	4	70	...	...	...
Equity III .....	...	...	...	3	30	...	...	...	...	...
Future Interests .....	...	...	...	...	...	4	22	...	4	19
Legal Ethics .....	...	...	...	...	...	...	...	...	2	76
Legislation .....	...	...	...	...	...	...	...	...	3	17
Municipal Corporations .....	...	...	...	...	...	...	...	...	3	30
Office Practice .....	...	...	...	...	...	2	52	...	...	...
Partnership .....	...	...	...	3	39	...	...	...	...	...
Practice Court .....	...	...	...	...	...	2	18	...	2	34
Private Corporations .....	...	...	...	3	74	3	74	...	...	...
Special Problems .....	...	...	...	...	...	1-6	1	...	...	...
Taxation .....	...	...	...	3	...	...	...	...	3	35
Trial Practice .....	...	...	...	3	59	...	...	...	...	...
Trusts .....	...	...	...	3	58	3	57	...	...	...
Constitutional Law Seminar .....	...	...	...	4	6	4	7	...	...	...
Trusts Seminar .....	...	...	...	2	10	2	10	...	2	10

MATHEMATICS

Sub-Freshman Algebra .....	...	...	...	400	3	130	...	...	...	...
Solid Geometry .....	...	...	...	401	0	62	401	0	26	...
Mathematics for Students of Agriculture .....	...	...	...	407	5	28	407	5	22	407
College Algebra .....	...	...	...	421	5	314	421	5	179	...
Plane Trigonometry .....	...	...	...	422	5	26	422	5	101	422
Analytic Geometry .....	...	...	...	...	...	...	...	...	...	5
Mathematics of Finance .....	...	...	...	429	5	23	429	5	38	423
Plane Trigonometry .....	...	...	...	...	...	...	431	5	325	431
College Algebra	432	5	36	432	5	424	432	5	198	...
Analytic Geometry	433	5	62	433	5	118	...	...	...	433
Elementary Mathematical Statistics .....	...	...	...	...	...	...	...	...	...	435
Calculus .....	...	...	...	441	5	358	441	5	122	...
Calculus	442	5	26	...	...	...	442	5	305	442
Calculus .....	...	...	...	443	5	89	...	...	...	443
Advanced Calculus .....	...	...	...	501	3	40	...	...	...	...
Differential Equations .....	...	...	...	...	...	...	502	3	29	...
Vector Analysis .....	...	...	...	...	...	...	...	...	...	503
Advanced Calculus	601	5	39	601	5	39	...	...	...	...
Introduction to the Theory of Functions of a Complex Variable .....	...	...	...	...	...	...	607	5	22	...
Differential Equations .....	...	...	...	...	...	...	611	5	37	...
Advanced Euclidian Geometry .....	...	...	...	...	...	...	621	5	23	...
Projective Geometry .....	...	...	...	...	...	...	...	...	...	623
Solid Analytic Geometry	625	5	27	625	5	11	...	...	...	...
Elementary Theory of Equations	641	5	26
Vector Analysis	661
Introduction to the Theory of Relativity	671	5	17

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Finite Differences	692	5	6	...	...	...
Statistical Methods of Forecasting.....	697	5	7
Introduction to Analysis I	701	3	17	...	...	...	...	...	...
Introduction to Analysis II	702	3	16	...	...	...
Introduction to Analysis III	703	3	13
Seminary in Mathematics	800	3-5	3	800	3-5	4	800	3-5	5	800	3-5	7
Reading and Research	801	3-10	7	801	3-10	8	801	3-10	3	801	3-10	7
Methods and Problems in Theory of Real Functions	804	5	3	...	...	...	...	...	...	...	...	...
Infinite Series and Products.....	809	5	17	...	...	...	...	...	...
Point-Sets	812	5	11	...	...	...
Methods of Analysis I	814	5	9
Parametric Problems of the Calculus of Variations I	818	5	5	...	...	...	...	...	...
Parametric Problems of the Calculus of Variations II	819	5	4	...	...	...
Differential and Integral Equations I.....	828	5	10	...	...	...
Differential and Integral Equations II.....	829	5	5
Finite Groups	841	5	11	...	...	...	...	...	...	...	...	...
Theory of Numbers	850	5	15	...	...	...	...	...	...
Introduction to Higher Algebra	851	5	21	...	...	...	...	...	...	...	...	...
Algebraic Numbers	855	5	12	...	...	...
Linear Algebra	856	5	9
Minimal Surfaces and the Problem of Plateau I	871	3	4	...	...	...	...	...	...
Minimal Surfaces and the Problem of Plateau II	872	3	4	...	...	...
Minimal Surfaces and the Problem of Plateau III	873	3	3
MECHANICAL ENGINEERING												
Heat-Power Engineering	409	3	53
Materials of Engineering	427	3	111
Reports of Summer Work (not included in total)	439	5	17)	...	...	...	...	...	...
General Aeronautics	501	3	6	...	...	...	...	...	...
Heat-Power Engineering	507	4	38	507	4	26	...	...	...
Heat-Power Engineering	509	3	60	...	...	...	...	...	...
Machine Design	513	5	25	...	...	...	...	...	...
Machine Design	514	4	44	...	...	...

Machine Design	515	5	37
Mechanical Engineering Laboratory	531	2	27
Mechanical Engineering Laboratory	532	2	21
Mechanical Engineering Laboratory	533	2	20
Heating and Ventilating	551	2	27
Heating and Ventilating	572	4	13
Mechanical Engineering Laboratory	573	5	36
Mechanical Engineering Laboratory	574	3	31
Mechanical Engineering Laboratory	576	2	22
Mechanical Engineering Laboratory	577	2	20
Mechanical Engineering Laboratory	591	5	20
Mechanical Engineering Laboratory	592	3	16
Heating and Ventilating	605	4	13
Heat-Power Engineering	607	5	70
Heat-Power Engineering	608	5	52
Heat-Power Engineering	614	4	63
Mechanism	616	2	49
Mechanism Drawing	617	2	26
Mechanical Engineering Laboratory	625	3	55
Gas Engineers and Producers	630		41
Inspection Trip to the West	651-2-3	$\frac{1}{2}$	60
A.S.M.E. Student-Branch Meeting	651-2-3	$\frac{1}{2}$	48
Mechanical Engineering Laboratory	664	3	47
Mechanical Engineering Laboratory	665	3	47
Automotive Engineering	704	3	12
Automotive Engineering	705	3	12
Air-Compressing and Refrigerating Machinery	715	3	6
Diesel Engines	725	3	13
Machine Design	727	5	54
Machine Design	728	5	51
Inspection Trip to the East	730		31
Hydraulic Machinery	742	3	28
Machine Design	743	3	19
Machine Design	744	5	32
Steam Turbines	746	3	3
Thesis Work	748	3	10
A.S.M.E. Student-Branch Meetings	751-2-3	$\frac{1}{2}$	34
Hydraulic Power	751-2-3	$\frac{1}{2}$	34
Aeronautical and Automotive Engines	754	3	5
Aerodynamics	756	3	21
Aerodynamics	757	3	11
Airplane Design	758	3	6
Aerodynamics	759	3	3
Mechanical Engineering Laboratory	779	3	32
Mechanical Engineering Laboratory	780	3	15
Mechanical Engineering Laboratory	781	3	20
Automotive Engineering Laboratory	782	3	13
Automotive Engineering Laboratory	783	3	6
Research Work	801	5-10	3
Research Work	802	5-10	3
Research Work	803	5-10	2
Gas Power and Design	805	2-5	1

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
MECHANICS												
Statics	501	5	11	...	...	...
Strength of Materials	502	5	9
Statics	503	5	16	...	...	...	503	5	80
Statics	601	5	179	601	5	68	...	...	...
Strength of Materials	602	5	91	602	5	158	602	5	73
Strength of Materials	605	2	48	605	2	63	605	2	153
Dynamics and Hydraulics	607	3	39	607	3	66	607	3	175
Advanced Theoretical Mechanics	801	3	5	...	...	...	...	...	...
Advanced Theoretical Mechanics	802	3	5	...	...	...
Advanced Theoretical Mechanics	803	3	6
MEDICINE AND CLINICAL MEDICINE												
Introduction to Clinical Medicine	600	1	100	...	...	...	...	...	...
Medical Law	601	2	78
Physical Diagnosis	601	3	90
Medicine, General and Clinical	602	5	80	...	...	...	...	...	...
Medicine, General and Clinical	603	5	82	...	...	...
Medicine, General and Clinical	604	5	88
Nervous Diseases	605	3	80	...	...	...	...	...	...
Dermatology	606	3	90
Genito-Urinary Diseases	607	3	90	...	...	...
Medicine: Special Topics, Ethics, Etc.	608	1	75	...	...	...	...	...	...
Medicine: Special Topics, Ethics, Etc.	609	1	75	...	...	...
Medicine: Special Topics, Ethics, Etc.	610	1	75
Psychiatry	611	1	76	...	...	...
Pediatrics, Didactic	612	2	80	...	...	...	...	...	...
Therapeutics	614	2	75
Pediatrics, Didactic and Clinical	615	2	77	...	...	...	...	...	...
Pediatrics, Didactic and Clinical	616	2	80	...	...	...
Pediatrics, Didactic and Clinical	617	2	80
Tuberculosis	619	2	62	...	...	...
Syphilology	623	2	68
Clinical Medicine	625	2	80	...	...	...
Visceral Neurology	630	2	30	...	...	...
Localization in the Nervous System	631	2	8
METALLURGY												
Elementary Fuel Testing	401	2	26
Metallurgical Analysis	405	5	16

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
The Romanticists .....	...	...	...	601	4	37	...	...	...	...	...	...
Wagner and the Music Drama.....	602	4	6	602	4	15	...	...	...	...	...	...
Modern Music	603	4	23	...	...	...	603	4	23	...	...	...
History of Choral Music.....	...	...	...	...	...	...	...	...	...	605	3	19
Music in the Junior High School.....	610	2	38	610	2	34	...	...	...	...	...	...
High School Music	611	2	12	...	...	...	...	...	...	611	2	30
Supervision of Music in Elementary Schools..	612	3	8	...	...	...	...	...	...	...	...	...
Methods of Class Instruction in Piano.....	...	...	...	614	1	11	...	...	...	...	...	...
Methods of Class Instruction in Piano.....	...	...	...	...	...	...	615	1	10	...	...	...
Methods of Class Instruction in Piano.....	...	...	...	...	...	...	...	...	...	616	1	10
Methods of Class Instruction in Voice.....	...	...	...	617	1	2	...	...	...	...	...	...
Methods of Class Instruction in Voice.....	...	...	...	...	...	...	618	1	2	...	...	...
Methods of Class Instruction in Voice.....	...	...	...	...	...	...	...	...	...	619	1	2
Instrumentation	630	3	7	630	3	33	...	...	...	...	...	...
Instrumentation	632	3	7	...	...	...	632	3	28	...	...	...
Instrumentation .....	...	...	...	...	...	...	...	...	...	635	3	4
Organization and Conducting of the School	...	...	...	...	...	...	...	...	...	...	...	...
Band and Orchestra	642	2	22	...	...	...	642	2	25	...	...	...
Band and Orchestra.....	643	3	15	...	...	...	...	...	...	643	3	11
Minor Problems	650	1-5	4	650	1-5	6	650	1-5	6	650	1-5	10
University Chorus.....	A	1	59	A	1	374	A	1	219	A	1	225
University Orchestra	B	1	42	B	1	72	B	1	75	B	1	80
The University Band.....	...	...	...	C	1	234	C	1	22	C	1	196
Concert Bands .....	...	...	...	D	1	77	D	1	83	D	1	84
Glee Club (Women).....	...	...	...	E	0	68	E	0	53	E	0	50
Departmental Orchestra .....	...	...	...	F	1	56	F	1	69	F	1	65
Glee Club (Men).....	...	...	...	G	0	131	G	0	140	G	0	119
Military Science Band.....	...	...	...	...	...	...	...	...	198	...	...	...
NURSING												
Elementary Nursing .....	...	...	...	401	5	33	...	...	...	401	5	35
Elementary Nursing	402	3	11	...	...	...	402	3	34	...	...	...
Medical Nursing: Medical Diseases.....	...	...	...	...	...	...	...	...	...	410	3	2
Medical Nursing: Pediatrics .....	...	...	...	413	3	31	...	...	...	413	3	31
Medical Nursing: Communicable Diseases.....	...	...	...	...	...	...	...	...	...	416	3	43
Medical Nursing: Nerv. and Mental Diseases	...	...	...	418	1	42	...	...	...	...	...	...
Medical Nursing: Surgical Diseases.....	...	...	...	420	1	36	...	...	...	...	...	...
Surgical Nursing: Surgical Diseases.....	...	...	...	425	3	41	...	...	...	...	...	...
Surgical Nursing: Gynecology and Genito- Urinary Diseases .....	...	...	...	...	...	...	428	2	31	...	...	...

Surgical Nursing: Orthopedics.....	...	...	...	...	...	...	...	...	430	1	35
Surgical Nursing: Diseases of the Eye.....	...	...	...	...	...	...	...	...	432	1	31
Surgical Nursing: Diseases of Ear, Nose, and Throat.....	...	...	...	...	...	...	...	...	433	1	31
Obstetrical Nursing.....	...	...	435	3	29	...	...	...	...	...	...
Ethics and History of Nursing.....	...	...	...	...	...	450	2	30	...	...	...
Survey of Nursing.....	...	...	...	...	...	455	1	51	...	...	...
Professional Problems.....	...	...	...	...	...	460	1	51	...	...	...
Introduction to Institutional Work.....	...	...	...	...	...	...	...	...	470	1	44
Case Studies.....	...	...	...	...	...	...	...	...	480	1	21
Public Sanitation.....	...	...	...	...	...	490	2	33	...	...	...
Nursing Practice.....	...	...	501	3	32	...	...	...	501	3	35
Nursing Practice.....	502	5	11	...	...	502	5	36	...	...	...
Nursing Practice.....	503	7	4	503	7	10	503	7	1	503	7	28
Nursing Practice.....	504	7	23	...	...	504	7	7	...	...	...
Nursing Practice.....	505	7	2	505	7	15	505	7	2	505	7	4
Nursing Practice.....	506	7	3	506	7	1	506	7	24	506	7	3
Nursing Practice.....	507	7	16	507	7	1	507	7	20
Nursing Practice.....	508	7	30	...	...	508	7	3	...	...	...
Nursing Practice.....	509	7	2	509	7	33	...	...	509	7	4
Nursing Practice.....	510	7	4	510	7	1	510	7	33	...	...
Nursing Practice.....	511	7	3	511	7	1	511	7	33
Nursing Practice.....	512	7	14	512	7	3	512	7	1
OBSTETRICS												
Obstetrics, Normal.....	...	...	...	...	...	601	3	90	...	...	...
Obstetrics, Abnormal.....	...	...	...	...	...	...	...	...	602	3	90
Obstetrics, Pathological.....	...	...	603	3	76	...	...	...	...	...	...
Obstetrics, Pathological.....	...	...	...	...	...	604	3	76	...	...	...
Clinical Obstetrics.....	605	4	20	605	4	20	605	4	20	605	4	20
OPERATIVE DENTISTRY												
Dental Anatomy.....	...	...	...	601	2	65	...	...	...	...	...
Dental Anatomy.....	...	...	...	...	...	...	602	3	67	...	...
Dental Anatomy and Operative Technic.....	...	...	...	...	...	...	...	...	603	2	63
Operative Technic.....	...	...	...	605	3	43	...	...	...	...	...
Operative Technic.....	...	...	...	...	...	...	606	3	43	...	...
Principles and Practice of Operative Dentistry.....	...	...	...	609	2	46	...	...	...	...	...
Principles and Practice of Operative Dentistry.....	...	...	...	...	...	...	610	4	46	...	...
Principles and Practice of Operative Dentistry.....	...	...	...	...	...	...	...	...	611	3	45
Principles and Practice of Operative Dentistry.....	...	...	...	613	3	48	...	...	...	...	...
Principles and Practice of Operative Dentistry.....	...	...	...	...	...	...	614	4	48	...	...
Principles and Practice of Operative Dentistry.....	...	...	...	...	...	...	...	...	615	4	48
Dental Hygiene: Immunology.....	...	...	...	...	...	...	...	...	616	1	36
Oral Hygiene: Immunology.....	...	...	...	617	3	45	...	...	...	...	...
Oral Hygiene: Immunology.....	...	...	...	...	...	...	618	3	43	...	...
Porcelain Technic.....	...	...	...	...	...	...	...	...	619	1	43
Special Dental Histology.....	...	...	...	620	3	43	...	...	...	...	...
Dental Medicine: Pharmacology.....	...	...	...	621	1	46	...	...	...	...	...
Dental Medicine: Pharmacology.....	...	...	...	...	...	...	622	1	44	...	...
Dental Medicine.....	623	2	43	
Dental Medicine.....	625	2	50	
Dental Medicine.....	626	2	50	

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Dental Medicine	627	2	50
Principles and Practice of Exodontia & X-Ray	628	2	44	...	...	...	...	...	...
Principles and Practice of Exodontia & X-Ray	629	2	43	...	...	...
Principles and Practice of Exodontia & X-Ray	630	2	42
Orthodontia Principles and Practice	631	2	42
Orthodontia Principles and Practice	633	2	48	...	...	...	...	...	...
Orthodontia Principles and Practice	634	2	48	...	...	...
Orthodontia Principles and Practice	635	2	48
Anesthetics	637	2	48	...	...	...	...	...	...
Anesthetics	638	2	48	...	...	...
Anesthetics	639	2	48
Ethics, Economics, History, & Jurisprudence	641	1	49	...	...	...	...	...	...
Ethics, Economics, History, & Jurisprudence	642	1	49	...	...	...
Ethics, Economics, History, & Jurisprudence	643	1	49
Oral Surgery	645	2	48	...	...	...	...	...	...
Oral Surgery	646	2	48	...	...	...
Oral Surgery	647	2	49
OPHTHALMOLOGY												
Pathology of the Eye	460	3	6	...	...	...	...	...	...
Ophthalmology	601	3	92	...	...	...	...	...	...
ORAL HYGIENE & MEDICAL ECONOMICS												
Oral Hygiene and Medical Economics	601	1	75	...	...	...	...	...	...
OTO-LARYNGOLOGY												
Oto-Laryngology	602	3	90	...	...	...
PATHOLOGY												
Elementary Pathology (School of Nursing)	401	2	33
General Pathology	600	1	86	...	...	...	...	...	...
General Pathology	601	3	86	...	...	...
Special Pathology	602	5	84
Clinical Pathology	603	3	93	...	...	...	...	...	...
Clinical Pathology	604	3	89	...	...	...
Medical Pathology	606	2	35
Post-Mortem Demonstration	607	1	25	607	1	25	607	1	25
Advanced Pathology	608	3-5	13	...	...	...	...	...	...
Advanced Pathology	609	3-5	9	...	...	...
Advanced Pathology	610	3-5	6

Advanced Special Pathology.....	...	...	...	611	3-5	2	612	3-5	3	613	3-5	2
Experimental Pathology.....	...	...	...	...	...	...	614	3-5	1	...	...	...
Advanced Clinical Pathology.....	...	...	...	616	3	18	617	3	20	618	3	10
General Pathology.....	...	...	...	650	3	49	651	3	46	...	...	...
Dental Pathology.....	...	...	...	...	...	...	...	...	...	652	2	39
Pathologic Technique.....	...	...	...	657	...	1	...	...	...	...	...	...
Pathologic Technique.....	...	...	...	...	...	...	666	3	3	...	...	...
Research in Pathology.....	...	...	...	810	3-5	1	811	3-5	1	667	3	2
Research in Clinical Pathology.....	...	...	...	813	3	1	814	3	1	815	3	2
PHARMACY												
Pharmacy Survey.....	...	...	...	400	1	47	...	...	...	...	...	...
Pharmacy.....	...	...	...	401	5	39	401	5	14	...	...	...
Pharmacy.....	...	...	...	...	...	...	402	5	30	402	5	12
Pharmacy.....	...	...	...	403	5	14	...	...	...	403	5	25
Pharmacy.....	...	...	...	404	5	21	404	5	12	...	...	...
Pharmacy.....	...	...	...	...	...	...	405	5	20	405	5	11
Pharmacy.....	...	...	...	406	5	11	...	...	...	406	5	21
Materia Medica.....	...	...	...	407	3	27	...	...	...	...	...	...
Materia Medica.....	...	...	...	...	...	...	408	3	31	...	...	...
Materia Medica.....	...	...	...	...	...	...	...	...	...	409	3	28
Pharmaceutical Analysis.....	...	...	...	410	5	31	...	...	...	...	...	...
Pharmaceutical Analysis.....	...	...	...	...	...	...	411	5	33	...	...	...
Pharmaceutical Analysis.....	...	...	...	...	...	...	...	...	...	412	5	28
Pharmacognosy: Microscopical.....	...	...	...	416	3	31	...	...	...	...	...	...
Pharmacognosy: Microscopical.....	...	...	...	...	...	...	417	3	31	...	...	...
Pharmacognosy: Microscopical.....	...	...	...	...	...	...	...	...	...	418	3	32
Toxicology.....	...	...	...	...	...	...	...	...	...	419	5	31
Pharmacognosy: Commercial.....	...	...	...	...	...	...	...	...	...	422	5	21
Pharmacy: Commercial.....	...	...	...	...	...	...	423	3	41	...	...	...
Pharmacy: Commercial.....	...	...	...	...	...	...	...	...	...	424	3	35
Pharmaceutical Arithmetic.....	...	...	...	425	3	50	425	3	15	...	...	...
Pharmaceutical Arithmetic.....	...	...	...	...	...	...	426	3	40	426	3	8
Pharmacy: Applied.....	...	...	...	427	3	8	...	...	...	427	3	22
Current Pharmaceutical and Tech. Literature.....	...	...	...	428	2	24	...	...	...	428	2	15
Pharmaceutical Arithmetic.....	...	...	...	429	3	8	...	...	...	429	3	34
Pharmaceutical Latin.....	...	...	...	430	5	27	...	...	...	430	5	25
Thesis.....	...	...	...	431	3	33	432	3	33	...	...	...
PHILOSOPHY												
Introduction to Philosophy.....	401	5	44	401	5	39	401	5	38	401	5	60
Elementary Logic.....	402	5	11	402	5	22	402	5	34	402	5	64
Elementary Ethics.....	405	5	35	405	5	30	405	5	44	405	5	80
Ancient Philosophy.....	...	...	...	601	5	30	...	...	...	...	...	...
Modern Philosophy.....	602	5	28	...	...	...	602	5	24	...	...	...
Contemporary Philosophy.....	603	5	14	...	...	...	...	...	...	603	5	9
Development of Hebrew Ideas in the Old Testament.....	...	...	...	...	...	...	...	...	...	607	5	9
Philosophy and Poetry.....	...	...	...	...	...	...	...	...	...	608	3	10
Origins of Christian Thought.....	610	3	7
Origin and Development of Religious Ideas.....	611	5	31
Plato.....	623	3	16

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Representative Pre-Kantian Philosophers.....	625	3	4	...	...	...
Elements of Symbolic Logic.....	650	3	6
Philosophy of Science.....	652	3	10	...	...	...	...	...	...
Philosophy of Religion.....	653	3	13	...	...	...	...	...	...	653	3	12
Esthetics.....	655	5	17	...	...	...
Principles of Individual and Social Ethics....	656	3	12
Minor Problems.....	660	2-10	3	660	2-10	6	660	2-10	5	660	2-10	5
Metaphysics of Knowledge and Nature.....	661	3	8	...	...	...	...	...	...
Metaphysics of Personality and Values.....	662	3	5	...	...	...
Seminary in Systematic Philosophy.....	801	3	4	...	...	...	...	...	...
Seminary in Systematic Philosophy.....	802	3	3	...	...	...
Seminary in Systematic Philosophy.....	803	3	3
Seminary in Systematic Philosophy.....	804	3	5	...	...	...	...	...	...	...	...	...
Research.....	808	3-10	4	...	...	...	...	...	...	...	...	...
Research.....	809	3-10	6	809	3-10	7	...	...	...
Research.....	811	3-10	8
PHONETICS												
Speech Correction.....	400	0	5
Elements of Speech.....	401	5	52	401	5	24	401	5	36
General Phonetics: Practical.....	407	5	34	...	...	...
Sound: Laboratory Phonetics.....	601	5	9	...	...	...	...	...	...
English Phonetics.....	610	3	2
Americanization Phonetics.....	615	3-5	4	615	3-5	5	...	...	...
Technique of Speech Correction in Elementary Schools.....	630	5	3
Work with the Deaf and Hard of Hearing....	635	5	2	635	5	5	635	5	1
Correction of Stammering and Stuttering....	640	5	5	...	...	...	...	...	...
Minor Research.....	700	3-5	2	700	3-5	5	700	3-5	7
Phonetic Research: Major Problems.....	800	3-5	4	...	...	...
PHOTOGRAPHY												
Photography.....	611	3	35	...	...	...	611	3	44
Advanced Photography.....	750	3	8	...	...	...
PHYSICAL EDUCATION—MEN												
Hygiene.....	400	1	793	400	1	674	400	1	331
Physical Education.....	401	1	1795
Physical Education.....	402	1	1646
Physical Education.....	403	1	1471

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	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Therapeutic Gymnastics and Physical Examinations	493	3	17
Elementary and Intermediate Swimming.....	495	1	163	...	...	...	...	...	...	...	...	...
Advanced Swimming	496	1	33	...	...	...	...	...	...	...	...	...
Tennis	514	1	86	...	...	...	...	...	...	...	...	...
Theory and Practice of Physical Education...	541	3	37	...	...	...	...	...	...
Theory and Practice of Physical Education...	542	3	32	...	...	...
Theory and Practice of Physical Education...	543	3	22
Theory and Practice of Physical Education...	545	3	19	...	...	...	...	...	...
Theory and Practice of Physical Education...	546	3	25	...	...	...
Theory and Practice of Physical Education...	547	3	21
Theory and Practice of Physical Education...	549	3	32	...	...	...	...	...	...
Theory and Practice of Physical Education...	550	3	30	...	...	...
Theory and Practice of Physical Education...	551	3	29
Principles of Physical Education.....	621	3	36	...	...	...	...	...	...	...	...	...
Teaching of Health.....	643	3	47	...	...	...	...	...	...
Minor Problems in Physical Education.....	651	1-4	2	...	...	...	651	1-4	2
Therapeutic Gymnastics, Advanced.....	671	3	30	...	...	...	671	3	4
Organization & Administration of Phys. Educ.	682	5	58	...	...	...
History & Principles of Physical Education..	683	5	20	...	...	...
Kinesiology	691	3	15	...	...	...	...	...	...
PHYSICS												
Elementary Physics	401	5	98	401	5	49	...	...	...
Elementary Physics	402	5	38	402	5	26
General Physics: Mechanics and Heat.....	403	5	71	...	...	...	...	...	...
General Physics: Sound, Light, Electricity..	404	5	50	...	...	...
Elementary Electron Physics.....	409	5	14	...	...	...	...	...	...	...	...	...
General Physics: Mechanics.....	411	5	279	411	5	27	...	...	...
General Physics: Heat and Light.....	412	5	16	...	...	...	412	5	261	...	...	...
General Physics: Electricity.....	413	5	224
Physics for Students of Agriculture:
Mechanics, Heat, and Electricity.....	421	5	12	421	5	59	421	5	27
General Physics for Engineers: Mechanics...	431	5	299	431	5	114	431	5	29
General Physics for Engineers: Heat, Sound, and Light	432	5	29	...	...	...	432	5	289	...	...	...
General Physics for Engineers: Electricity and Magnetism	433	5	31	...	...	...	433	5	233
Electricity and Magnetism.....	435	3	90	...	...	...	...	...	...
Electricity and Magnetism.....	436	5	72	...	...	...

Electrical Measurements and Photometry.....	...	...	...	...	...	...	...	...	437	5	64
Geometrical and Physical Optics.....	...	...	...	501	5	23	...	...	...	...	...
Geometrical and Physical Optics.....	...	...	...	506	...	...	502	5	17	...	...
Geometrical and Physical Optics.....	...	...	...	...	...	...	...	...	...	503	5
Physical Optics.....	607	4	13	607	4	9	...	...	...	...	...
Advanced Electricity.....	...	...	...	...	...	...	608	4	20	...	...
Molecular Physics and Heat.....	...	...	...	609	4	20	...	...	...	...	...
Conduction of Electricity through Gases and Radioactivity.....	610	4	17	...	...	...	610	4	32	...	...
Modern Spectroscopy.....	611	4	22	...	...	...	...	...	...	611	4
Periodic and Transient Electric Currents.....	...	...	...	...	...	...	...	...	...	612	4
Advanced Physical Laboratory.....	616	3-24	45	616	3-24	19	616	3-24	23	616	3-24
X-Rays and Crystal Structure.....	...	...	...	620	4	19	...	...	...	...	...
Acoustics.....	...	...	...	...	...	...	621	4	18	...	...
Thermionics and High Vacuum Phenomena.....	622	4	16	...	...	...	...	...	...	622	4
Introduction to Theoretical Physics.....	...	...	...	623	3	23	...	...	...	...	...
Introduction to Theoretical Physics.....	...	...	...	...	...	...	624	3	20	...	...
Introduction to Theoretical Physics.....	...	...	...	...	...	...	...	...	...	625	3
Minor Investigations.....	...	...	...	...	...	...	630	3-5	3	630	3-5
Modern Theories of Electricity & Applications.....	...	...	...	738	4	35	...	...	...	...	...
Thermo-dynamics.....	...	...	...	803	3	17	...	...	...	...	...
Thermo-dynamics.....	...	...	...	...	...	...	804	3	13	...	...
Line Spectra and Atomic Structure.....	813	3	22	813	3	10	...	...	...	...	...
X-Rays and Quantum Theory and Practice.....	...	...	...	...	...	...	814	3	6	...	...
X-Rays and Quantum Theory of Atomic Structure.....	...	...	...	...	...	...	...	...	...	815	3
Quantum and Wave Mechanics.....	817	3	12	817	3	11	...	...	...	...	...
Quantum and Wave Mechanics.....	...	...	...	...	...	...	818	3	9	...	...
Quantum and Wave Mechanics.....	...	...	...	...	...	...	...	...	...	819	3
Statistical Mechanics.....	...	...	...	824	3	7	...	...	...	...	...
Applications of Wave Mechanics to Physico- Chemical Phenomena.....	...	...	...	...	...	...	825	3	6	...	...
Problems in Astrophysics.....	...	...	...	...	...	...	...	...	...	826	3
Selected Topics from Contemporaneous Physics.....	827	3	8	...	...	...	...	...	...	...	...
Research Laboratory.....	830	3	16	830	3	3	...	...	...	...	...
Research Laboratory.....	...	...	...	...	...	...	831	3	26	...	...
Research Laboratory.....	...	...	...	...	...	...	...	...	...	832	3
Band Spectra and Related Topics.....	851	3	15	...	...	...	...	...	...	...	...
PHYSIOLOGICAL CHEMISTRY, PHARMA- COLOGY AND MATERIA MEDICA											
Materia Medica.....	...	...	...	...	...	...	405	4	49	...	...
Physiological Chemistry.....	...	...	...	601	5	96	...	...	...	...	...
Physiological Chemistry.....	...	...	...	...	...	...	602	5	76	...	...
Physiological Chemistry.....	...	...	...	611	5	20	...	...	...	...	...
Physiological Chemistry.....	...	...	...	...	...	...	612	5	15	...	...
Quantitative Methods of Blood and Urine Analysis.....	...	...	...	...	...	...	...	...	...	613	3
Biochemical Methods of Research.....	...	...	...	614	5	9	...	...	...	...	...
Toxicology.....	...	...	...	618	3	10	...	...	...	...	...
Minor Problems in Physiological Chemistry.....	619	2-15	1	619	2-15	4	619	2-15
Physiological Chemistry.....	632	5
Physiological Chemistry.....	633	2	50

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Materia Medica	670	5	82	...	5	...
Pharmacology	671	5	82
Advanced Physiological Chemistry	807	3	7
Seminary in Physiological Chemistry	813	2	7
Biochemical Biography	815	1	7
Chemistry of Medicinal Substances	830	3	7	...	...	...
Physiological Chemical Research	901	...	2	901	...	4	901	...	6
PHYSIOLOGY												
Elementary Physiology	407	5	53	407	5	252	407	5	79	407	5	75
Elementary Physiology	408	5	32	408	5	152	408	5	57
Elementary Physiology	409	5	44	...	...	...	409	5	115	409	5	39
Elementary Physiology	412	3	21
Comparative Physiology	413	5	49	...	...	...	...	...	...
Comparative Physiology	414	5	36	...	...	...
Principles of Physiology	419	5	114
Advanced Physiology	604	6	44	...	...	...	604	6	86
Advanced Physiology	605	6	84	605	6	41	...	...	...
Advanced Physiology	606	2	87	...	...	...
Physiology	607	2	43
Physiological Laboratory	611	5	1	611	5	5	...	...	...	...	...	...
Physiological Laboratory	612	5	1	...	...	...
Physiological Laboratory	613	5	2
Advanced Physiology	615	5	10	...	...	...	615	5	5
Advanced Physiology	616	5	13	...	...	...
General Physiology	617	5	10	...	...	...	...	...	...	...	...	...
Physiology of Metabolism	618	3 or 5	11	...	...	...	...	...	...
Physiology of Reproduction	619	3 or 5	15	...	...	...
Physiology of Exercise	620	3 or 5	29
General Physiology	622	5	6	...	...	...
General Physiology	623	5	7
Research Physiology: Minor	801	5	1	801	5	1	...	...	...	...	...	...
Research Physiology: Minor	802	5	4	...	...	...
Research Physiology: Minor	803	5	8
Research Physiology: Major	805	10 or 15	1	...	...	...
Seminary in Physiology	815	1	6	...	...	...	...	...	...
Seminary in Physiology	816	1	10	...	...	...
Seminary in Physiology	817	1	9

POLITICAL SCIENCE												
American Federal Government	401	5	54	401	5	200	401	5	145	401	5	175
Government and Politics of Foreign Countries	402	5	30	402	5	75	402	5	132	402	5	93
American State Government .....	...	...	...	403	5	31	403	5	45	403	5	83
American State Administration .....	...	...	...	...	...	...	...	...	...	604	5	19
Principles of Public Administration .....	...	...	...	605	5	21	...	...	...	...	...	...
Municipal Government	607	5	17	607	5	28	...	...	...	607	5	34
Municipal Functions .....	...	...	...	...	...	...	608	3	14	...	...	...
Introduction to Jurisprudence .....	...	...	...	611	5	45	...	...	...	...	...	...
International Law .....	...	...	...	...	...	...	612	5	54	...	...	...
Contemporary International Politics .....	...	...	...	...	...	...	...	...	...	613	5	44
Administration of Justice .....	...	...	...	...	...	...	...	...	...	615	5	30
American Constitutional Law .....	...	...	...	...	...	...	616	3	27	...	...	...
Ancient and Medieval Political Thought .....	...	...	...	621	3	26	...	...	...	...	...	...
Modern Political Thought .....	...	...	...	...	...	...	622	3	26	...	...	...
Contemporary Political Thought	623	3	16	...	...	...	...	...	...	623	3	23
Methods of Governmental Research .....	...	...	...	...	...	...	631	3	8	...	...	...
Legislation .....	...	...	...	...	...	...	...	...	...	633	3	20
Public Opinion and Political Processes .....	...	...	...	634	5	38	...	...	...	...	...	...
Elections and Parties .....	...	...	...	...	...	...	635	5	34	...	...	...
International Organization	645	3	31	...	...	...	...	...	...	...	...	...
Contemporary Japan	647	3	16	...	...	...	...	...	...	...	...	...
Honors Courses .....	...	...	...	705	3-5	2	706	3-5	5	707	3-5	1
Research in Political Science	801	3-5	6	801	3-5	14	802	3-5	6	803	3-5	15
POULTRY HUSBANDRY												
Farm Poultry Husbandry .....	...	...	...	401	5	37	401	5	37	401	5	48
Poultry Breeding and Housing .....	...	...	...	402	5	7	...	...	...	...	...	...
Poultry Farm Sanitation .....	...	...	...	...	...	...	...	...	...	413	5	9
Poultry Nutrition .....	...	...	...	...	...	...	601	5	14	...	...	...
Poultry Farm and Hatchery Management .....	...	...	...	...	...	...	...	...	...	602	5	1
Marketing Poultry Products .....	...	...	...	603	3	5	...	...	...	...	...	...
Special Problems in Poultry Husbandry .....	...	...	...	701	3-15	1	701	3-15	4	701	3-15	4
Research in Poultry Husbandry .....	...	...	...	801	...	1	...	...	...	...	...	...
PRACTICAL ARTS AND VOCATIONAL EDUCATION												
The Laboratory of Industries	400	5	20	400	5	33	...	...	...	...	...	...
Wood and Cabinet Work .....	...	...	...	...	...	...	409	5	20	...	...	...
Wood and Cabinet Work	411	5	23	...	...	...	...	...	...	411	5	17
Wood and Cabinet Work	413	5	22	...	...	...	...	...	...	...	...	...
Problems of Planning the Laboratory: Equipment, Maintenance and Supplies	430	3	15	...	...	...	...	...	...	430	3	20
Project Design	450	3	8	...	...	...	...	...	...	...	...	...
Advanced Project Design .....	...	...	...	...	...	...	...	...	...	452	3	23
Fundamentals in Guidance	470	3	22	470	3	17	470	3	7	470	3	18
Special Methods in Industrial Arts and Vocational Industrial Education	480	3	26	480	3	18	...	...	...	...	...	...
Shopwork Related to the Farm	510	5	27	...	...	...	510	5	35	...	...	...
Practical Arts Laboratory for Teachers in Elementary Schools	541	3	25	...	...	...	541	3	52	...	...	...
Introduction to Practical Arts and Vocational Education	600	3	67	600	3	33	600	3	31	600	3	32

THE WORK OF INSTRUCTORS—1931-1932—Continued

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COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Occupational Counseling	607	2	22	...	...	...	607	2	15	...	...	...
Subject Matter and Method in the Laboratory of Industries	608	3	16	...	...	...	608	3	10	...	...	...
Principles of Part-time Education	609	2	14	...	...	...	...	...	...	...	...	...
Occupational Studies in High and Continuation Schools	610	3	18	...	...	...	...	...	...	610	3	14
Teaching and Supervision of Practical Arts in Elementary Schools	623	3	14	...	...	...	...	...	...	...	...	...
Administration of Industrial Arts and Vocational Education	625	3	16	625	3	14	...	...	...	...	...	...
Subject Matter and Method in Vocational Part-time and Continuation Schools or Classes	640	3	22	...	...	...	...	...	...	...	...	...
Minor Problems in Practical Arts and Vocational Education .....	...	...	...	650	1 or +	11	...	...	...	...	...	...
Minor Problems in Practical Arts and Vocational Education	651	1 or +	60	...	...	...	651	1 or +	21	...	...	...
Minor Problems in Practical Arts and Vocational Education	652	1 or +	56	...	...	...	...	...	...	652	1 or +	37
Practical Arts Laboratory for Teachers in Elementary Schools	655	3	11	...	...	...	...	...	...	...	...	...
Principles of Commercial Education	660	3	25	...	...	...	...	...	...	...	...	...
Subject Matter and Methods in Commercial Education	663	3	19	...	...	...	...	...	...	...	...	...
Administration and Supervision of Commercial Education	665	3	14	...	...	...	...	...	...	...	...	...
Subject Matter and Method in the Laboratory of Commerce	667	3	15	...	...	...	...	...	...	...	...	...
Occupational Analysis and Organization of Subject Matter in Industrial Arts and Vocational Industrial Education	680	3	21	...	...	...	680	3	12	...	...	...
Research in the Laboratory of Industries	800	3-5	8	...	...	...	...	...	...	...	...	...
Scientific Studies in the Practical Arts and Vocational Education	801	2	21	801	2	15	...	...	...	...	...	...
Scientific Studies in the Practical Arts and Vocational Education	802	2	9	...	...	...	802	2	16	...	...	...
Scientific Studies in the Practical Arts and Vocational Education .....	...	...	...	...	...	...	...	...	...	803	2	8
Major Research Problems in Practical Arts and Vocational Education	804	3 or +	1	...	...	...	804	3 or +	3	...	...	...

PRINCIPLES OF EDUCATION

Principles of Education.....(1-401)	301	3	125	...	...	...	...	...	...	...	...	...	...
Principles of Education.....(2-401)	302	3	111	...	...	...	...	...	...	...	...	...	...
Methods of High School Teaching....(1-410)	312	3	47	...	...	...	...	...	...	...	...	...	...
Principles and Methods of Secondary School Teaching.....(2-410)	313	2	37	...	...	...	...	...	...	...	...	...	...
Kindergarten and Pre-School Teaching (400)	318	2	9	...	...	...	...	...	...	...	...	...	...
Principles of Education.....	...	...	401	4	188	401	4	130	401	4	278	...	...
Contemporary Elementary Educational Practice.....	406	3	91	...	...	406	3	45	...	...	...	...	...
Principles and Methods of Secondary School Teaching.....	...	...	410	4	84	410	4	103	410	4	91	...	...
Principles and Methods of Elementary School Teaching.....	...	...	440	7	119	...	...	...	430	5	23	...	...
Supervised Teaching in Secondary Schools....	...	...	440	...	...	...	...	...	440	7	245	...	...
Supervised Teaching in Elementary Schools....	...	...	...	...	...	...	...	...	441	10	19	...	...
Teaching Nature Study and Science in the Elementary School.....	473	3	18	...	...	...	...	...	...	...	...	...	...
Teaching of Arithmetic in the Elementary Schools.....	492	3	35	492	3	26	...	...	...	...	...	...	...
Teaching of English Studies in the Elementary Schools.....	493	3	77	493	3	18	...	...	...	...	...	...	...
Teaching of Social Studies in the Intermediate Grades.....	494	3	16	494	3	4	...	...	...	...	...	...	...
Teaching the Primary Grades.....	495	3	52	495	3	6	...	...	...	...	...	...	...
Teaching the Social Studies in the Primary Grades.....	496	3	27	496	3	18	...	...	...	...	...	...	...
Teaching Children's Literature.....	499	3	89	499	3	36	...	...	...	...	...	...	...
Teaching High School Literature.....(1-662)	340	3	62	...	...	...	...	...	...	...	...	...	...
Teaching High School Literature.....(2-662)	341	3	42	...	...	...	...	...	...	...	...	...	...
High School Composition Teaching.....(Eng. 714)	343	3	44	...	...	...	...	...	...	...	...	...	...
Methods and Problems of the Physical Sciences.....(1-661)	382	2	11	...	...	...	...	...	...	...	...	...	...
Methods and Problems of the Physical Sciences.....(2-661)	383	2	10	...	...	...	...	...	...	...	...	...	...
The History Course of Study in Secondary Schools.....(1-663)	384	3	18	...	...	...	...	...	...	...	...	...	...
The History Course of Study in Secondary Schools.....(2-663)	385	3	16	...	...	...	...	...	...	...	...	...	...
Moral Ideals in Education.....	601	3	50	...	...	601	3	16	...	...	...	...	...
Supervision of Teaching in Secondary Schools	610	3	59	...	...	...	...	...	610	3	14	...	...
Survey of Scientific Investigations in Elementary School Subjects.....	612	3	9	...	...	...	...	...	612	3	5	...	...
Supervision of Elementary School Teaching..	613	3	22	...	...	...	...	...	613	3	14	...	...
Curriculum Construction in Elementary Education.....	614	3	5	...	...	614	3	13	...	...	...	...	...
Experimental Elementary Schools.....	615	3	16	...	...	615	3	20	...	...	...	...	...
Elementary Teacher Training.....	...	...	...	...	...	...	...	...	616	4	14	...	...
Conceptions of Mind in Educational Theory..	620	3	41	...	...	620	3	79	...	...	...	...	...
Directed Observation in Elementary Teaching	623	1	124	623	1	5	623	1	5
Practicum in Elementary Education.....	624	2	37	624	2	14

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COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Problems of Curriculum Construction in Secondary Education	625	3	60	625	3	33	...	...	...	...	...	...
Supervision of Student Teaching in Elementary Schools	633	3	10	...	...	...	...	...	...	...	...	...
Modern Tendencies in Education	640	3	35	...	...	...	...	...	...	640	3	79
Theories of Interest in Education .....	...	...	...	...	...	...	643	3	28	...	...	...
Social Education .....	...	...	...	...	...	...	...	...	...	645	3	11
Minor Problems	650	1-4	54	...	...	...	...	...	...	...	...	...
Minor Problems .....	...	...	...	651	1-4	22	651	1-4	7	651	1-4	15
Principles and Methods of Teaching the Mentally Retarded	654	3	15	...	...	...	...	...	...	...	...	...
Supervised Teaching in Special Classes .....	...	...	...	...	...	...	...	...	...	656	5	2
Methods and Problems of the Natural Sciences .....	...	...	...	660	4	14	...	...	...	...	...	...
Methods and Problems of the Natural Sciences .....	...	...	...	...	...	...	...	...	...	661	4	14
Teaching Literature in the High School .....	...	...	...	662	5	30	662	5	22	662	5	28
Organizing History for the Classroom .....	...	...	...	663	5	28	...	...	...	663	5	23
Teaching the Social Studies other than History .....	...	...	...	...	...	...	...	...	...	665	3	21
The Place of Schools in the Social Organization	680	3	32	...	...	...	...	...	...	...	...	...
Theories of the Educative Process	682	3	18	...	...	...	...	...	...	...	...	...
The Thinking Process in its Educational Bearings	683	3	19	683	3	51	...	...	...	683	3	24
The Place of Scientific Method in Education .....	...	...	...	...	...	...	...	...	...	684	3	16
The Teaching of American History	700	3	32	700	3	22	...	...	...	700	3	43
The Teaching of Biology .....	...	...	...	...	...	...	...	...	...	705	3	32
Teaching Composition in High School .....	...	...	...	714	5	26	714	5	25	714	5	15
Teaching and Supervision of Journalism in Secondary Schools	716	3	9	...	...	...	...	...	...	...	...	...
The Teaching of Dramatics .....	...	...	...	717	5	20	...	...	...	...	...	...
The Teaching of German .....	...	...	...	725	3	7	...	...	...	...	...	...
Methods of Teaching Latin .....	...	...	...	730	3	9	...	...	...	...	...	...
The Teaching of Latin	731	3	17	...	...	...	...	...	...	...	...	...
The Teaching of Mathematics	735	3	29	735	3	19	...	...	...	...	...	...
The Teaching of French	740	3	10	740	3	16	...	...	...	...	...	...
The Teaching of Spanish	745	3	4	...	...	...	...	...	...	745	3	10
Teaching of Mechanical Drawing .....	...	...	...	750	3	30	...	...	...	...	...	...
Teaching of Mechanical Drawing .....	...	...	...	...	...	...	751	3	21	...	...	...
The Teaching of Chemistry and Physics	756	3	13	...	...	...	...	...	...	756	3	30
Spoken English: Teacher's Course	760	3	13	...	...	...	760	3	5	...	...	...
The Teaching of Nursing .....	...	...	...	...	...	...	...	...	...	770	3	3

Special Problems in Educational Theory.....	801	3	24	...	...	...	...	...	...	...	...	...
Special Problems in Educational Theory.....	...	...	...	802	3	18	...	...	...	...	...	...
Special Problems in Educational Theory.....	...	...	...	...	...	...	803	3	13	...	...	...
Special Problems in Educational Theory.....	...	...	...	...	...	...	...	...	...	804	3	12
Special Problems in Secondary Education....	810	3	21	...	...	...	...	...	...	...	...	...
Special Problems in Secondary Education....	...	...	...	811	3	8	...	...	...	...	...	...
Special Problems in Secondary Education....	...	...	...	...	...	...	812	3	6	...	...	...
Special Educational Problems in the Social Studies in Secondary Schools.....	814	3	3	...	...	...	...	...	...	...	...	...
Special Educational Problems in the Social Studies in the Secondary Schools.....	...	...	...	...	...	...	...	...	...	816	3	4
Seminar in Curriculum Construction.....	...	...	...	818	3	1	...	...	...	...	...	...
Special Educational Problems in the Physical Sciences in the Secondary Schools.....	...	...	...	821	3	2	...	...	...	...	...	...
Special Educational Problems in the Physical Sciences in the Secondary Schools.....	...	...	...	...	...	...	...	...	...	822	3	3
Special Problems in Elementary Education...	824	3	6	...	...	...	...	...	...	...	...	...
Special Problems in Elementary Education...	...	...	...	825	3	15	...	...	...	...	...	...
Special Problems in Elementary Education...	...	...	...	...	...	...	826	3	10	...	...	...
Special Problems in Elementary Education...	...	...	...	...	...	...	...	...	...	827	3	6
The Teaching and Supervision of History in the Secondary Schools.....	835	3	4	...	...	...	...	...	...	...	...	...
Problems in the Practice of Elementary Super- vision.....	840	3	13	...	...	...	...	...	...	840	3	7
Teaching and Supervision of English in the Secondary Schools.....	843	3	27	...	...	...	...	...	...	...	...	...
The Teaching of Modern Foreign Languages in the Secondary Schools.....	846	3	4	...	...	...	...	...	...	...	...	...
Special Problems in Teaching and Supervision of Foreign Languages in Secondary Schools..	...	...	...	848	1-3	7	...	...	...	...	...	...
Major Research.....	851	3 or +	5	851	3 or +	7	851	3 or +	1	851	3 or +	2
College Teaching.....	860	3	14	...	...	...	860	3	10	...	...	...
Technic of Curriculum Construction.....	...	...	...	861	3	8	...	...	...	...	...	...
PROSTHESIS												
Prosthetic Dentistry Technic.....	...	...	...	601	4	65	...	...	...	...	...	...
Prosthetic Dentistry Technic.....	...	...	...	...	...	...	602	3	67	...	...	...
Prosthetic Dentistry Technic.....	...	...	...	...	...	...	...	...	...	603	5	65
Prosthetic Dentistry Technic.....	...	...	...	605	4	38	...	...	...	...	...	...
Prosthetic Dentistry Technic.....	...	...	...	...	...	...	606	2	38	...	...	...
Prosthetic Dentistry Technic.....	...	...	...	...	...	...	...	...	...	607	4	49
Prosthetic Dentistry Principles and Practice..	...	...	...	609	2	46	...	...	...	...	...	...
Prosthetic Dentistry Principles and Practice..	...	...	...	...	...	...	610	3	49	...	...	...
Prosthetic Dentistry Principles and Practice..	...	...	...	...	...	...	...	...	...	611	4	50
Prosthetic Dentistry Practice.....	...	...	...	613	2	50	...	...	...	...	...	...
Prosthetic Dentistry Practice.....	...	...	...	...	...	...	614	2	50	...	...	...
Prosthetic Dentistry Practice.....	...	...	...	...	...	...	...	...	...	615	2	50
Dental Metallurgy.....	...	...	...	...	...	...	...	...	...	619	2	38
Crown and Bridge Technic.....	...	...	...	621	4	38	...	...	...	...	...	...
Crown and Bridge Technic.....	...	...	...	...	...	...	622	2	37	...	...	...
Crown and Bridge Technic.....	623	4	39
Crown and Bridge Technic.....	625	2	42
Crown and Bridge Technic.....	626	2	42

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COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Crown and Bridge Technic .....	...	...	...	...	...	...	...	...	...	627	2	41
Crown and Bridge Practice .....	...	...	...	629	2	50	...	...	...	...	...	...
Crown and Bridge Practice .....	...	...	...	...	...	...	630	2	50	...	...	...
Crown and Bridge Practice .....	...	...	...	...	...	...	...	...	...	631	2	50
PSYCHOLOGY												
Probation .....	...	...	...	...	...	...	000	0	37	000	0	16
Elementary Psychology	401	5	158	401	5	616	401	5	341	401	5	696
Elementary Psychology	402	5	261	402	5	281	402	5	311	402	5	281
Intermediate General Psychology .....	...	...	...	406	3	3	...	...	...	406	3	11
Educational Psychology	407	5	135	407	5	259	407	5	211	407	5	180
Mental Hygiene	408	2	32	...	...	...	408	2	50	...	...	...
Introduction to Applied Psychology .....	...	...	...	...	...	...	...	...	...	...	...	...
Psychology of the Elementary School Subjects .....	...	...	...	410	3	11	...	...	...	...	...	...
Psychological Problems in Engineering .....	...	...	...	...	...	...	...	...	...	501	3	27
Experimental Psychology	601	3	6	601	3	29	...	...	...	...	...	...
Experimental Psychology .....	...	...	...	...	...	...	602	3	15	...	...	...
Experimental Psychology .....	...	...	...	...	...	...	...	...	...	603	3	8
Physiological Psychology .....	...	...	...	605	3	32	...	...	...	...	...	...
Advanced Physiological Psychology .....	...	...	...	...	...	...	606	3	10	...	...	...
Genetic Psychology	607	5	23	...	...	...	...	...	...	607	5	37
Educational Statistics: Elementary .....	...	...	...	608	4	40	...	...	...	...	...	...
The Exceptional Child	609	3	85	...	...	...	609	3	28	609	3	65
Adolescence	610	3	63	610	3	69	...	...	...	...	...	...
The Mentally Deficient Child	611	3	33	611	3	64	...	...	...	...	...	...
Educational Statistics: Intermediate .....	...	...	...	...	...	...	612	3	7	...	...	...
Mental and Educational Tests	613	3	51	613	3	16	...	...	...	...	...	...
Problems of Test Work	614	3	21	...	...	...	...	...	...	...	...	...
Individual Testing by Binet-Simon Method	616	2	28	616	2	25	616	2	16	...	...	...
Advanced Binet Testing .....	...	...	...	...	...	...	617	2	25	...	...	...
Clinical Tests	618	2	13	618	2	20	...	...	...	618	2	15
Psychological Clinic	619	2 or 4	6	619	2 or 4	10	619	2 or 4	14	619	2 or 4	11
Advanced Psychological Clinic	620	2	4	620	2	3	620	2	8	620	2	17
Social Psychology	621	3	19	...	...	...	621	3	58	...	...	...
The Psychology of the Delinquent Child	622	3	24	...	...	...	...	...	...	622	3	59
Psychology of Vision and Hearing .....	...	...	...	...	...	...	624	5	3	...	...	...
Problems in Learning and Thinking .....	...	...	...	...	...	...	626	3	20	...	...	...
The Learning Process	628	3	21	...	...	...	628	3	10	...	...	...
Advanced Psychology	629	5	30	629	5	19	...	...	...	...	...	...
Psychology of Feeling and Emotion .....	...	...	...	...	...	...	630	5	17	...	...	...

Theory of Intelligence .....	...	...	...	...	...	...	634	5	57	631	3	15
Criminal and Legal Psychology .....	...	...	...	...	...	...	...	...	...	...	...	...
Psychology of Advertising .....	...	...	635	3	47	...	...	...	...	635	3	65
Advertising Psychology Laboratory .....	...	...	...	...	...	...	636	3	8	...	...	...
Industrial Psychology .....	...	...	637	3	53	...	...	...	...	...	...	...
Psychology and Personnel .....	...	...	...	...	...	...	639	3	52	...	...	...
Educational and Vocational Guidance	640	3	30	...	...	...	640	3	20	...	...	...
Abnormal Psychology .....	...	...	...	...	...	...	641	5	91	...	...	...
Psychopathology .....	...	...	...	...	...	...	...	...	...	642	3	87
Abnormal Psychology .....	...	...	...	...	...	...	...	...	...	643	1	36
Human Motives and Incentives .....	...	...	...	...	...	...	...	...	...	644	3	15
History of Psychology .....	...	...	645	5	24	...	...	...	...	...	...	...
Theoretical Psychology .....	...	...	647	3	18	...	...	...	...	...	...	...
Minor Problems	650	1 or +	24	650	1 or +	17	650	1 or +	25	650	1 or +	35
Psychology of High School Subjects	652	3	16	...	...	...	652	3	8	...	...	...
Advanced Statistics	654	3	2	...	...	...	...	...	...	654	3	5
Comparative Psychology .....	...	...	...	655	5	5	...	...	...	...	...	...
Comparative Psychology .....	...	...	...	...	...	...	...	...	...	656	3	6
Comparative Psychology Laboratory .....	...	...	...	657	3	1	...	...	...	...	...	...
Psycho-Educational Problems	661	2	2	...	...	...	661	2	1	661	2	7
The Elementary and Pre-School Child .....	...	...	...	662	3	32	...	...	...	...	...	...
Psychological Problems of Deans of Women	664	3	15	...	...	...	664	3	4	...	...	...
Psychological Problems of Deans of Women	665	3	8	665	3	9	665	3	1	665	3	6
Research Problems of the Deans of Women .....	...	...	...	...	...	...	...	...	...	674	1 or +	3
Personnel Forms and Interrogation Methods	675	3	10	675	3	5	...	...	...	...	...	...
Graphic Methods .....	...	...	...	...	...	...	677	2	5	...	...	...
Psychology of Personality .....	...	...	...	...	...	...	...	...	...	683	3	30
Major Research	801	3 or +	32	801	3 or +	55	801	3 or +	56	801	3 or +	53
Seminary in Experimental Psychology	802	2	9	802	2	8	802	2	11	802	2	12
Seminary in Educational Psychology	803	2	10	803	2	8	...	...	...	803	2	3
Contemporary Psychological Literature .....	...	...	...	805	1	8	805	1	10	805	1	12
Seminary in Abnormal Psychology .....	...	...	...	...	...	...	806	2	14	...	...	...
Seminary in Industrial Psychology .....	...	...	...	...	...	...	...	...	...	807	2	8
Psycho-Analysis .....	...	...	...	808	2	25	...	...	...	...	...	...
Psychological Problems in Higher Education	810	2	9	...	...	...	...	...	...	807	2	8
Seminary in Psychological Statistics .....	...	...	...	815	2	3	815	2	5	...	...	...

PUBLIC HEALTH

Principles of Public Health Nursing .....	...	...	...	404	5	8	...	...	...	404	5	21
Elementary Nursing .....	...	...	...	407	2	31	407	2	36	407	2	46
Public Health Nursing Field Work .....	...	...	...	...	...	...	...	...	...	452	2	1
Public Health Nursing Field Work .....	...	...	...	...	...	...	...	...	...	453	2	1
Public Health Nursing Field Work, including Social Case Work .....	...	...	...	454	13	1	...	...	...	...	...	...
Public Health Problems .....	...	...	...	602	5	19	602	5	44	602	5	62
Hygiene and Sanitation .....	...	...	...	604	3	78	...	...	...	...	...	...
Hygiene and Sanitation .....	...	...	...	...	...	...	605	3	76	...	...	...
Hygiene and Sanitation	606	3	78
Child Hygiene	608	2	18	608	2	23	608	2	22
Public Health Research	803	5-15	1

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COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
ROMANCE LANGUAGES												
FRENCH												
Elementary French	401	5	14	401	5	265	401	5	75	401	5	66
Elementary French	402	5	15	402	5	68	402	5	186	402	5	65
Intermediate French	403	5	6	403	5	109	403	5	47	403	5	126
Intermediate French	404	5	19	404	5	92	404	5	77	404	5	44
Reading of French	405	0	23	405	0	25	405	0	17	405	0	15
Elementary French Conversation and Com- position .....	...	...	...	410	5	30	410	5	35	410	5	43
Advanced French .....	...	...	...	413	5	40	413	5	34	413	5	32
Advanced French	414	5	11	414	5	14	414	5	30	414	5	23
Advanced French .....	...	...	...	415	5	9	...	...	...	...	...	...
French Literature of 17th Century (1680- 1715) .....	...	...	...	...	...	...	600	5	14	...	...	...
French Literature of 17th Century (1600- 1660) .....	...	...	...	...	...	...	...	...	...	601	5	15
French Literature of 17th Century (1660- 1680) .....	...	...	...	602	5	7	...	...	...	...	...	...
French Literature of 18th Century (1700- 1750)	607	3	16	607	3	15	...	...	...	...	...	...
French Literature of 18th Century (1750- 1789) .....	...	...	...	...	...	...	608	3	12	...	...	...
The French Novel to 1850 .....	...	...	...	...	...	...	609	3	11	...	...	...
The French Novel, 1850 to the Present Day ..	610	3	18	...	...	...	...	...	...	610	3	21
French Lyric Poetry .....	...	...	...	...	...	...	...	...	...	615	3	5
Cours de Style .....	...	...	...	623	3	10	623	3	12	...	...	...
Cours de Style .....	...	...	...	...	...	...	624	3	10	624	3	8
Explication de Textes .....	...	...	...	...	...	...	625	3	8	...	...	...
Explication de Textes .....	...	...	...	...	...	...	...	...	...	626	3	10
French Phonetics	627	3	14	...	...	...	...	...	...	628	3	29
Modern French Syntax	628	3	13	...	...	...	...	...	...	...	...	...
History of the French Language .....	...	...	...	629	3	13	...	...	...	...	...	...
French Phonetics and Diction .....	...	...	...	632	5	11	632	5	14	...	...	...
Honors Course in French .....	...	...	...	705	3-10	2	...	...	...	...	...	...
Honors Course in French .....	...	...	...	...	...	...	706	3-10	1	...	...	...
Honors Course in French .....	...	...	...	...	...	...	...	...	...	707	3-10	1
Introduction to Old French	801	3	13	801	3	8	...	...	...	...	...	...
Introduction to Old French .....	...	...	...	...	...	...	802	3	9	...	...	...
Research in French Language or Literature ..	809	3-5	9	809	3-5	7	809	3-5	10	809	3-5	7
Seminary in French Literature	811	3	12	811	3	8	...	...	...	...	...	...

Seminary in French Literature.....	...	...	...	...	...	...	812	3	6	...	...	...
Old French Literature.....	...	...	...	...	...	...	...	...	...	813	3	6
Seminary in French Literature.....	...	...	...	...	...	...	...	...	...	817	3	6
SPANISH												
Elementary Spanish.....	401	5	16	401	5	306	401	5	97	401	5	71
Elementary Spanish.....	402	5	7	402	5	58	402	5	227	402	5	74
Intermediate Spanish.....	...	...	...	403	5	63	403	5	33	403	5	91
Intermediate Spanish.....	...	...	...	404	5	63	404	5	45	404	5	24
Commercial Correspondence.....	...	...	...	...	...	...	405	5	16	...	...	...
Elementary Spanish Composition.....	...	...	...	...	...	...	...	...	...	410	5	28
Advanced Spanish.....	413	5	8	413	5	15	413	5	20	413	5	8
Advanced Spanish.....	...	...	...	414	5	8	414	5	12	414	5	13
Advanced Composition and Conversation.....	...	...	...	605	3	6	...	...	...	...	...	...
Advanced Composition and Conversation.....	...	...	...	...	...	...	606	3	4	...	...	...
The Modern Spanish Novel.....	...	...	...	...	...	...	607	5	12	...	...	...
The Modern Spanish Novel.....	...	...	...	...	...	...	...	...	...	608	5	17
The Drama of the Golden Age.....	...	...	...	611	5	9	...	...	...	...	...	...
The Drama of the Golden Age.....	...	...	...	...	...	...	612	5	7	...	...	...
Prose of the Golden Age.....	613	5	15	...	...	...	...	...	...	...	...	...
Survey of Spanish Literature from Earliest Times to the 17th Century.....	...	...	...	615	5	5	...	...	...	...	...	...
Survey of Spanish Literature of the 17th and 18th Centuries.....	...	...	...	...	...	...	616	5	4	...	...	...
Modern Spanish Syntax.....	...	...	...	617	3	9	...	...	...	...	...	...
Spanish Phonetics.....	...	...	...	...	...	...	620	5	5	...	...	...
The Spanish Drama of the 16th Century.....	...	...	...	...	...	...	...	...	...	626	5	10
Honors Course in Spanish.....	...	...	...	...	...	...	...	...	...	707	3-10	1
Old Spanish.....	...	...	...	805	3	4	...	...	...	...	...	...
Old Spanish.....	...	...	...	...	...	...	806	3	5	...	...	...
Research in Spanish Language or Literature.....	810	2-5	7	...	...	...	810	2-5	5	810	2-5	6
Seminary in Spanish Literature.....	815	3	7	815	3	4	815	3	3	815	3	2
Old Spanish Literature.....	821	3	15	...	...	...	...	...	...	...	...	...
ITALIAN												
Elementary Italian.....	...	...	...	401	5	20	401	5	12	...	...	...
Elementary Italian.....	...	...	...	...	...	...	402	5	8	402	5	9
Modern Italian Literature—1800-1850.....	...	...	...	...	...	...	...	...	...	601	5	10
Modern Italian Literature—1851-1900.....	...	...	...	602	5	5	...	...	...	602	5	1
Survey of Italian Literature to 1400.....	...	...	...	609	3	4	...	...	...	...	...	...
Survey of Italian Literature—1400-1900.....	...	...	...	...	...	...	610	3	6	...	...	...
Dante's Life and Works.....	...	...	...	...	...	...	611	3	5	...	...	...
Dante's Life and Works.....	...	...	...	...	...	...	...	...	...	612	3	5
RURAL ECONOMICS												
Agricultural Economics.....	...	...	...	401	5	19	...	...	...	401	5	55
Farm Management.....	...	...	...	402	5	29	...	...	...	402	5	20
Farm Bookkeeping and Business Records.....	...	...	...	403	3	10	403	3	10	...	...	...
Advanced Farm Organization.....	...	...	...	602	3	6	...	...	...	...	...	...
Cooperation in Agriculture.....	...	...	...	...	...	...	603	5	22	...	...	...
The Agricultural Industry.....	...	...	...	...	...	...	605	3	16	...	...	...
Rural Social Organization.....	...	...	...	...	...	...	607	3	6	...	...	...
Price of Farm Products.....	...	...	...	...	...	...	...	...	...	612	3	21

Organization and Administration of the Education of the Mentally Retarded.....	674	3	8	...	...	...	...	...	...	...	...	...
Organization and Administration of the Education of Behavior Problem Children.....	675	3	10	...	...	...	...	...	...	...	...	...
Institute for Officers of Classroom Teachers' Associations	690	1-3	3	...	...	...	...	...	...	...	...	...
The Preparation of Theses and Other Scientific Papers	800	1	102	...	...	...	800	1	18	...	...	...
Administration of Colleges and Universities..	801	3	8	...	...	...	801	3	7	...	...	...
Seminary in School Administration.....	802	2-5	55	802	2-5	12	802	2-5	4	802	2-5	10
Ad Interim Projects .....	...	...	...	803	2-5	2	803	2-5	1	803	2-5	34
Major Research Problems	804	3 or +	40	...	...	...	...	...	...	...	...	...
Major Research Problems .....	...	...	...	805	3 or +	22	...	...	...	...	...	...
Major Research Problems .....	...	...	...	...	...	...	806	3 or +	22	...	...	...
Major Research Problems .....	...	...	...	...	...	...	...	...	...	807	3 or +	10
State Administration of Education.....	811	2	19	811	2	6	...	...	...	...	...	...
Administration of National Systems of Education	812	3	5	...	...	...	...	...	...	...	...	...
Legal Basis of School Administration.....	813	3	19	...	...	...	...	...	...	813	3	7
Seminary in County School Administration...	815	2-5	1	...	...	...	...	...	...	815	2-5	7
Seminary in Secondary School Administration..	817	2-5	13	...	...	...	...	...	...	...	...	...
Administration of the Curriculum in the Secondary School	818	3	22	...	...	...	818	3	7	...	...	...
*Proseminary (Teachers in Service).....	...	...	...	621	2	5	...	...	...	...	...	...
The Administration of Curriculum Reorganization	820	3	10	...	...	...	...	...	...	...	...	...
The Administration of Guidance Problems....	826	2	121	...	...	...	826	2	13	...	...	...
Personnel Administration in Education.....	827	3	95	827	3	13	...	...	...	...	...	...
High School Administration (City) first course	831	3	71	831	3	8	...	...	...	...	...	...
High School Administration (City) second course	832	3	40	...	...	...	832	3	15	...	...	...
Administrative Problems of the Large Cosmopolitan High School	833	3	7	...	...	...	...	...	...	...	...	...
Administration of Experimental Schools.....	835	2-4	3	...	...	...	...	...	...	...	...	...
Administration of Special Education.....	836	3	28	...	...	...	...	...	...	836	3	15
Educational Statistics: Elementary.....	838	3	132	...	...	...	...	...	...	...	...	...
Educational Statistics: Intermediate.....	839	3	24	...	...	...	...	...	...	...	...	...
Administration of the Junior College.....	840	3	8	...	...	...	...	...	...	840	3	8
Administration of Teacher Training Institutions	843	3	3	...	...	...	...	...	...	843	3	9
Financial Administration in Higher Education	844	3	5	...	...	...	844	3	6	...	...	...
Seminary in Administration of Higher Education	845	2-4	18	...	...	...	...	...	...	845	2-4	5
Business Management of Schools.....	850	2-4	68	...	...	...	...	...	...	850	2-4	12
School Finance	851	3	24	...	...	...	851	3	14	...	...	...
Planning and Construction of School Buildings	855	3	20	855	3	6	...	...	...	...	...	...
Equipment of School Buildings.....	856	2	19	...	...	...	...	...	...	...	...	...
Seminary in the Administration of Elementary Education	870	2-5	2	870	2-5	2
The Administration of Achievement Tests in Higher Education	872	3	16

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THE OHIO STATE UNIVERSITY

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Survey of Engineering:												
Elements of Engineering	3	413	...	3	380	...	3	345
Courses of General Interest:												
Greek Civilization	603	...	16	...	...	...
Foundations of Contemporary Civilization	605	5	115	605	5	66	...	...	...
Development of Modern Science	608	5	87	608	5	90	...	...	...
Survey of Higher Education for College Teachers	802	2	9	803	2	8
VETERINARY MEDICINE												
Topographic Anatomy of Domestic Animals	404	5	40	...	...	...	...	...	...
Topographic Anatomy of Domestic Animals	405	5	41	...	...	...
Applied Anatomy of Domestic Animals	407	3	25	...	...	...
Anatomy of the Horse—Part III	410	5	62	410	5	6	...	...	...
Anatomy of the Horse—Part II	411	5	62	...	...	...
Anatomy of the Horse—Part I	412	5	59
General Pathology	421	5	2	...	...	...	421	5	43
Special Pathology	423	4	34	...	...	...
Special Pathology of Infectious Diseases	426	5	33	...	...	...	...	...	...
Meat Inspection	427	3	31	...	...	...
Parasitology	428	4	30	...	...	...	...	...	...
Post Mortem and Laboratory Diagnosis	430	1	31	...	...	...	...	...	...
Post Mortem and Laboratory Diagnosis	431	1	33	...	...	...
Post Mortem and Laboratory Diagnosis	432	1	34
Post Mortem and Laboratory Diagnosis	433	1	33	...	...	...	...	...	...
Post Mortem and Laboratory Diagnosis	434	1	32	...	...	...
Post Mortem and Laboratory Diagnosis	435	1	33
Histology of the Domesticated Animals	436	5	64	...	...	...
Histology and Embryology of Domesticated Animals	437	5	59
Sporadic Diseases of Large Animals	441	4	28	...	...	...
Sporadic Diseases of Large Animals	442	4	39	...	...	...	...	...	...
Infectious Diseases of Large Animals	443	4	34	...	...	...
Infectious Diseases of Large Animals	444	4	32
Agricultural Veterinary Medicine	452	3	32	...	...	...
Agricultural Veterinary Medicine	453	3	10
Materia Medica and Therapeutics	461	4	39	...	...	...
Materia Medica and Therapeutics	462	4	37
Diseases of Small Animals	463	3	32	...	...	...	...	...	...
Diseases of Small Animals	464	3	36	...	...	...
Medical and Surgical Clinics	467	3	33	...	...	...	...	...	...

Medical and Surgical Clinics .....	...	...	...	...	...	...	468	3	33	...	...	...
Medical and Surgical Clinics .....	...	...	...	...	...	...	...	...	...	469	3	31
Physical Diagnosis .....	...	...	...	473	3	32	...	...	...	...	...	...
Special Surgery .....	...	...	...	474	4	32	...	...	...	...	...	...
Special Surgery .....	...	...	...	...	...	...	475	4	30	...	...	...
Special Surgery .....	...	...	...	...	...	...	...	...	...	476	4	31
Hygiene and Sanitation .....	...	...	...	...	...	...	...	...	...	479	3	33
Diseases of Poultry .....	...	...	...	...	...	...	...	...	...	481	3	32
General Surgery .....	...	...	...	482	4	34	...	...	...	...	...	...
General Surgery .....	...	...	...	...	...	...	483	4	34	...	...	...
Veterinary Medical Jurisprudence .....	...	...	...	...	...	...	...	...	...	485	1	32
Breeding Problems .....	...	...	...	550	1	32	...	...	...	...	...	...
Breeding Problems .....	...	...	...	...	...	...	551	1	31	...	...	...
Breeding Problems .....	...	...	...	...	...	...	...	...	...	552	1	31
Obstetrics .....	...	...	...	...	...	...	...	...	...	555	4	32
Medical and Surgical Clinics	570	3	3	570	3	31	...	...	...	...	...	...
Medical and Surgical Clinics .....	...	...	...	...	...	...	571	3	33	...	...	...
Medical and Surgical Clinics .....	...	...	...	...	...	...	...	...	...	572	3	32
Operative Practice .....	...	...	...	577	1	32	...	...	...	...	...	...
Operative Practice .....	...	...	...	...	...	...	578	1	31	...	...	...
Histologic Technic .....	...	...	...	...	...	...	...	...	...	620	3	2
Pathology Technic	621	2 or 5	4	621	2 or 5	2	621	2 or 5	3	621	2 or 5	3
Parasitology Technic	623	2 or 5	3	623	2 or 5	5	623	2 or 5	6	623	2 or 5	9
Special Problems in Veterinary Surgery .....	...	...	...	...	...	...	...	...	...	624	1-4	5
Advanced Veterinary Anatomy .....	...	...	...	625	3 or 5	1	625	3 or 5	1	625	3 or 5	2
Special Problems in Veterinary Medicine .....	...	...	...	626	3 or 5	1	626	3 or 5	1	626	3 or 5	7
Special Bovine Pathology	823	5	3	823	5	2	823	5	2	823	5	2
Special Pathology Problems .....	...	...	...	...	...	...	...	...	...	824	5	1
Special Poultry Pathology	825	5	2	825	5	2	...	...	...	825	5	1
Special Parasitology Problems	826	5	4	826	5	3	826	5	7	826	5	5
Research in Special Problems in Veterinary Medicine .....	...	...	...	827	3 or 5	1	827	3 or 5	2	827	3 or 5	2
Research Problems in Veterinary Medicine	829	5	1	...	...	...	...	...	...	...	...	...
WARD CLINICS												
Hospital Clinics in Medicine .....	...	...	...	601	2	75	602	2	75	603	2	75
Hospital Clinics in Surgery and the Surgical Specialties .....	...	...	...	601	2	75	602	2	75	603	2	75
ZOOLOGY AND ENTOMOLOGY												
Natural Science for Elementary Teachers .....	...	...	...	400	3	17	...	...	...	...	...	...
General Zoology	401	5	67	401	5	744	401	5	296	401	5	283
General Zoology	402	5	43	402	5	180	402	5	546	402	5	288
General Principles of Heredity	403	5	43	403	5	78	403	5	59	403	5	181
Ornithology .....	...	...	...	...	...	...	...	...	...	408	5	19
Elementary Zoology for Pre-Medical Students .....	...	...	...	...	...	...	...	...	...	411	5	32
General Entomology .....	...	...	...	...	...	...	450	5	16	...	...	...
Economic Entomology	451	5	16	451	5	35	...	...	...	451	5	57
Apiculture	453	5	3	...	...	...	...	...	...	...	...	...
Apiculture .....	...	...	...	462	5	3	...	...	...	...	...	...
Animal Parasites .....	...	...	...	...	...	...	504	5	17	...	...	...
Evolution .....	...	...	...	...	...	...	509	5	72	509	5	87
Advanced Studies in Animal Heredity	601	3	13	601	3	8	601	3	7

THE WORK OF INSTRUCTORS—1931-1932—Continued

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THE OHIO STATE UNIVERSITY

COURSE SUBJECT	SUMMER QUARTER			AUTUMN QUARTER			WINTER QUARTER			SPRING QUARTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Animal Behavior	605	3	7	...	...	...	...	...	...
Animal Behavior	606	3	10	...	...	...
Cellular Biology I	617	5	7	...	...	...
Cellular Biology II	618	5	9
Advanced Zoology of the Vertebrates.....	620	5	18
Advanced Zoology of Invertebrates I: The Protozoa	625	5	15	...	...	...	...	...	...
Advanced Zoology of Invertebrates II.....	626	5	17	...	...	...
Advanced Zoology of Invertebrates III.....	627	5	14
Advanced Entomology	651	5	15	651	5	15	...	...	...	...	...	...
Advanced Entomology	652	5	11	...	...	...
Insect Control	653	5	10	...	...	...	...	...	...
Insect Control	654	5	11
Entomological Literature and Principles of Taxonomy	660	5	10	...	...	...
Special Problems	700	3-5	54	...	...	...	...	...	...	...	...	...
Special Problems	701	3-5	18	701	3-5	34	701	3-5	24
Seminary in Entomology and Zoology.....	801	1	40	802	1	46	803	1	30
Invertebrate Zoology	805	5	7	806	5	3	807	5	3
Research	810	3-10	21	...	...	...	...	...	...	...	...	...
Research	811	3-10	32	812	3-10	30	813	3-10	31
Biological Control of Insects.....	814	5	15	815	5	20	816	5	13
Morphology and Development of Insects.....	817	5	8	...	...	...	...	...	...

* SHOWING THE WHOLE NUMBER OF DEGREES IN COURSE CONFERRED SINCE THE FOUNDING OF THE UNIVERSITY

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APPENDIX IV—*Concluded*[illegible]

* Statistics given prior to 1904 covered only the degrees granted at the Commencement.

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APPENDIX V

DEGREES AND CERTIFICATES GRANTED DURING YEAR 1931-32

AUGUST CONVOCATION

GRADUATE SCHOOL

Dean: WILLIAM MCPHERSON

DOCTOR OF PHILOSOPHY

Elinor Julia Barnes, B.Sc. in Edu., M.A.	Columbus
LaVerne Kenneth Bowersox, B.A. (Willamette University) ; M.A. (Syracuse University)	Wenatchee, Wash.
Charles Theodore Bumer, B.S. (Denison University) ; M.A. (Harvard University)	Columbus
Laurens Earle Bush, B.S. (The Citadel) ; M.S. (The University of North Carolina)	Chapel Hill, N. C.
Eva Galbreath Campbell, B.A. (Ohio Wesleyan University) ; M.A.	Guilford College, N. C.
Clarence Henley Cramer, B.A., B.Sc. in Edu., M.A.	Columbus
Harold Jerome Davison, B.S. (Otterbein College) ; M.A.	Columbus
Harry Frederic Dietz, A.B. (Butler College) ; M.A.	Indianapolis, Ind.
Daniel Dobroslav Droba, A.M. (University of Chicago)	Bosaca, Czechoslovakia
Wilford John Eiteman, B.A., M.A. (Ohio Wesleyan University)	Delaware
Reuben Hamilton Eliassen, A.B. (St. Olaf College) ; A.M. (Columbia University)	Northfield, Minn.
Clifton Wallace Hall, Ph.B. (Denison University) ; M.A.	Columbus
Louis Mace Heil, B.E. Physics, M.Sc.	Columbus
Edwin Ruthvan Henry, B.S. in Edu. (Kansas State Teachers College) ; M.A.	Dodge City, Kan.
Marathon Eby High, A.B. (McPherson College) ; M.A.	Columbus
Paul Lee Huber, B.A. (Ohio Wesleyan University) ; M.A.	Kilbourne
Henry Janzen, A.B. (Bluffton College) ; M.A.	Osler, Sask., Can.
Edwin Oswald Koch, B.A. (The College of Wooster) ; M.A. (University of Missouri) Lincoln, Ill.	
Cline Morgan Koon, B.S. (West Virginia University) ; A.M. (Columbia University)	Parkersburg, W. Va.
Ruth Madeline Kraft, B.S. (Michigan State College of Agriculture and Applied Science) ; M.Sc.	Columbus
Lennie Young Lancaster, B.Sc. in Agr. (University of Kentucky) ; M.Sc.	Bowling Green, Ky.
Julian Maris Mavity, A.B. (Earlham College) ; M.A.	French Lick, Ind.
Ralph Michael Melaven, B.S. in Chem. Engr. (South Dakota State School of Mines) ; M.Sc.	Rapid City, S. D.
William Harold Metzger, B.S. in Agr. (Purdue University) ; M.S. (Kansas State Agricultural College)	Kewanna, Ind.
William Daniel Overman, B.Sc. in Edu., M.A.	Columbus
Mabel Frances Schmeiser, A.B. (Cornell College) ; M.A. (University of Wisconsin) ..	Wapello, Ia.
Clarence Harry Smeltzer, B.S., A.M. (Columbia University)	Bellefonte, Pa.
Benjamin Harrison Smith, B.A. (Wabash College) ; M.S. (George Washington University)	Terre Haute, Ind.
Kenneth Ludwig Smoke, B.A., M.A.	Canton
Archie Newton Tissot, B.Sc. in Agr., M.Sc.	Winchester
Oscar Wesley, B.A. (Baldwin-Wallace College) ; M.A.	Columbus
Ralph Gault Whisler, A.B. (Findlay College) ; M.A.	Findlay
Roland Gage Will, A.B. (Rio Grande College) ; M.A.	Columbus
Harry Benjamin Wyman, B.Sc. in Edu., M.A.	Columbus
William Lesquereux Young, A.B. (Capital University) ; M.A.	Columbus

(Thirty-five candidates)

MASTER OF ARTS

Ella Lauretta Ackerman, B.Sc. in Edu.	Columbus
Howard Holston Alden, B.S. (Carnegie Institute of Technology)	Massillon
Arden Lacey Allyn, B.A. (Ohio Wesleyan University)	Kenton

Ronald Bahmer Almack, B.Sc. in Edu.	Columbus
Herschel Clinton Applegate, B.S. (Miami University)	Troy
Luella McFarlin Ater, B.Sc. in Edu.	Columbus
Marvin Augustus Bacon, A.B. (University of Michigan)	Delaware
John Milton Badertscher, A.B. (Bluffton College)	Dalton
Mary Matilda Bailey, B.A. (Muskingum College)	New Concord
Azellia Agnes Baker, A.B. (Rio Grande College)	Wellston
Homer Kenneth Baker, B.S. in Edu. (Miami University)	Osborn
Cleo Livingston Bard, A.B. (Defiance College)	Piqua
William Walker Barndollar, A.B. (Wheaton College)	Columbus
George Alfred Beck, B.A. (Adrian College)	Holliday's Cove, W. Va.
Louise Thelma Bell, B.Sc. in Edu.	Columbus
Clemens E. Blauch, B.S. in Edu. (Kent State College)	Brewster
Elroy William Bollinger, B.S. (University of Wisconsin)	Grand Forks, N. D.
Charles Daniel Booher, A.B. (Wittenberg College)	Columbus
Philip Joseph Borofka, B.S. in Edu. (Kent State College)	Lakewood
Elmer Larue Boyles, A.B. (Otterbein College)	Bowling Green
Wallace Hobart Braden, B.A. (The College of Wooster)	Kinsman
George Ringwood Bryant, A.B. (Miami University)	Amanda
Bernice Jeannette Burrell, A.B. (Mount Union College)	Columbus
Richard Frederick Cain, B.S. in Edu. (Kent State College)	Clarington
Pera Nysa Campbell, A.B. (Defiance College)	Wapakoneta
Herman Wesley Carr, B.A. (Ohio Wesleyan University)	Newark
Delmas Richard Cawthorne, A.B. (Georgetown College)	Pineville, Ky.
Aaron Hamilton Chute, A.B. (University of Michigan)	Columbus
Nellie Louise Clark, B.Sc. in Edu.	Londonderry
Richard Sherman Clark, B.A.	Erie, Pa.
Eleanor Downing Converse, B.A. (Ohio Wesleyan University)	Plain City
Luke K. Cooperrider, B.Sc. in Agr.	Worthington
Joseph Calvin Copeland, B.S., B. Com. Sc. (Ohio Northern University)	Van Buren
Gordon Page Corbitt, A.B. (West Virginia University)	Mannington, W. Va.
Wayne Franklin Cornell, B.S. in Edu. (Bowling Green State Normal College)	Edon
Bertha Lois Crilly, A.B. (Denison University)	Newark
Asa William Myrle Crossman, A.B. (Marion College)	Olmsted Falls
Byron Holvey Darst, A.B. (University of Akron)	Akron
John Cordon Davis, B.Sc. in Bus. Adm.	Westerville
Mary Lou Denton, B.S. (University of Illinois)	Columbus
Cletus Klahr DeWitt, A.B. (Heidelberg College)	Vermilion
John Francis Drake, A.B. (Denison University)	Monroeville
Lawrence Truman Drennan, B.A. (Ohio Wesleyan University)	Wheeling, W. Va.
Margaret Duncan, B.S. in Edu. (Ohio University)	Sidney
Helen Louise Durant, B.A. (Ohio Wesleyan University)	Washington C. H.
John Oliver Eagleson, B.S. (Muskingum College)	Circleville
Laura Amelia Eberwine, B.A. (The College of Wooster)	Dover
Howard William Eck, B.A., B.Sc. in Edu.	Van Wert
David Matthews Evans, B.A., B.Sc. in Edu.	Columbus
Mary Farnam, B.S. (University of Wisconsin)	Athens
Russell Willard Fenwick, B.S. (Otterbein College)	Winchester
Juanita Winifred Fitzgerald, B.Sc. in Edu.	London
Parley J. Foltz, A.B. (Defiance College)	Bucyrus
James Oliver Fox, B.A.	Garrettsville
Harold Peter Frank, B.S. in Edu. (Kent State College)	Mayfield Heights
Paul Everett German, B.Sc. in Edu.	Hopewell
Harold Marion Ginsburg, B.A.	Marietta
Olive Ione Givin, A.B. (Otterbein College)	Cadiz
Robert Collocott Goldbach, B.Sc. in Agr.	Rocky River
Aaron Logan Griffin, B.Sc. in Edu.	Columbus
Charles Rudolph Grothaus, A.B. (Bluffton College)	Belle Center
Lester William Haering, A.B. (Oberlin College)	Crestline
Walter Nicholas Halbedel, A.B. (Miami University)	Niles
James J. Hall, A.B. (Rio Grande College)	Chesapeake
Margaret Ellen Hall, B.A. (Emory University)	Columbus
Sidney Lawrence Halperin, B.A.	Columbus
Beverly Henry Heard, A.B. (Atlanta University)	Wilberforce

Dayton Eyster Heckman, B.A.	Edon
Donald Sumner Hecock, B.A. (Ohio Wesleyan University)	Elyria
Lina Baird Heffron, A.B. (University of Nebraska)	London
William Henry Hildreth, B.Sc. in Edu.	Woodstock
Paul Leroy Hill, B.A.	Rising Sun
Clara Cornella Holtzman, B.A., B.Sc. in Edu.	Columbus
Blanche Estella Hornbeck, B.S. (Western Reserve University)	Cleveland
Ralph Aurelius Howard, B.Sc. in Agr.	Delta
Ralph Magee Hudson, B.A., B.Sc. in Edu.	Ashtabula
William Buford Hudson, B.S. in Edu. (Kansas State Teachers College)	Oskaloosa, Kan.
Dale DeLoon Hutson, A.B. (Otterbein College)	Findlay
Glenn Bertice Jeffers, B.A. (Muskingum College)	Camden
William Edwin Jones, B.S. in Edu. (Kansas State Teachers College)	Garden City, Kan.
Riley Roosevelt Jordan, A.B. (Manchester College)	Elkhart, Ind.
Gertrude Irene Kapp, B.S. in Edu. (Miami University)	Oxford
Lowry Bruce Karnes, B.A. (Muskingum College)	New Concord
Emma Lorinda Keis, A.B. (Florida State College for Women)	Mt. Vernon
John Wendell Keller, A.B. (Heidelberg College)	Tiffin
Agnes Jane Kerrigan, B.Sc. in Edu.	Washington C. H.
Thomas Caleb Knapp, B.Sc. in Edu.	Jefferson
Casper Christian Kraus, Jr., A.B. (West Virginia Wesleyan University)	Akron
Eileen Lancaster, B.S. in Edu. (University of Missouri)	Columbus
Wayne Morehead Lawrence, B.S. in Edu. (Miami University)	Fresno
Raymond Augustine Lemmon, B.S. in Edu. (Howard University)	Downington, Pa.
Herbert Claude Leonard, A.B. (Mount Union College)	Lisbon
Walter George Lezius, B.Sc. in Bus. Adm.	Rocky River
Paul Harold Luce, B.S. (The College of Wooster)	Paulding
Norval Neil Luxon, B.Sc. in Jour.	Columbus
Mary Annetta Magill, B.A.	Columbus
Purcell Mallett, B.S. in Edu. (Muskingum College)	Westerville
George Levier Mann, B.A.	Columbus
Harold Ruby Maurer, B.S. (The College of Wooster)	Willard
Lowell Honnold McAllister, B.A. (Muskingum College)	Columbus
Howard McClarren, B.Sc. in Agr.	Westerville
Sara Jackson McConnell, Ph.B. (Denison University)	Newark
Florence Estelle McCray, B.A. (The College of Wooster)	Columbus
Zora May McGlashan, B.A., B.Sc. in Edu.	Columbus
Harold Jennings McIntyre, A.B. (Otterbein College)	Columbus
Myron Christian Mehl, A.B. (Capital University)	Youngstown
Lydia Louise Meyer, B.A. (Ohio Wesleyan University)	Monroeville
Helen Frances Miller, A.B. (Bethany College)	Bethany, W. Va.
Willis Shipman Mozier, B.Sc. in Agr.	Springfield
Dwain Carl Murray, A.B. (Bluffton College)	Bluffton
Ferris Wellman Myrice, A.B. (Defiance College)	Bowling Green
Wilbur Clarence Neff, A.B. (Miami University)	Miamisburg
James Cecil Nelson, B.A. (University of Washington)	Bickleton, Wash.
Richard Verne Northup, B.S. in Edu. (Ohio Northern University)	North Baltimore
Hayden Whitney Olds, B.S. in Edu. (Bowling Green State Normal College)	Bowling Green
Velma Madeline Patterson, A.B. (Miami University)	Columbus
Henry Clay Payne, B.A.	Cincinnati
Helen Martha Petroskey, Ed.B. (University of California)	Santa Monica, Calif.
Verne MacDougall Pettit, B.A.	McComb
Kenneth James Pidgeon, B.A.	Sebring
Marie Leona Ploog, B.A. (Kansas Wesleyan University)	Lorraine, Kan.
Thomas Herbert Plummer, B.S. in Edu. (Ohio University)	Columbus
Randolph Porter, A.B. in Com. (Ohio University)	Athens
Mahlon Armand Povenmire, B.Sc. in Edu.	Columbus
Marcy Summers Powell, B.A.	Wellington
Dorothy Douthitt Raymer, B.A.	Beaver Falls, Pa.
John McLean Reed, B.S. in Edu., A.B. (Ohio Northern University)	Fostoria
Nellie Faye Rees, A.B. (Western Maryland College)	Columbus
Clarence Lamar Richey, B.A. (Otterbein College)	Northfield
Luella Mary Richey, B.L., B.A. (Ohio Wesleyan University)	Miami, Fla.
Robert Charles Von Riggie, B.A.	Worthington

Winston Riley, Jr., A.B. (Ohio University).....	Columbus
Grace Greenwood Roberts, B.S. in Edu. (Ohio University).....	Nelsonville
Narcissus Roberts, A.B. (Marshall College).....	Kenova, W. Va.
Waid Cross Roberts, B.Sc. in Edu.	Racine
Herman Boesel Romaker, A.B. (Defiance College).....	Liberty Center
Benjamin Rosenberg, B.A.	Cleveland
Nelson Bruce Rozelle, B.S. in Edu. (Bowling Green State Normal College).....	Deshler
Ira Clark Sayre, A.B. (Bethany College).....	East Liverpool
Ralph Alfred Schaller, B.S. in Edu. (Bowling Green State Normal College).....	Bowling Green
Rudolph Louis Schwanzle, B.S. (The Stout Institute).....	Emporia, Kan.
Elizabeth Lewis Schon, B.S. (University of Wisconsin).....	Columbus
Jacob Dugan Severs, B.S. in Edu. (Ashland College).....	Columbus
Ralph Willis Sharp, B.S. (University of Wisconsin).....	Edgerton
Hazel Shepard, B.A.	Columbus
Marie Paula Skodak, B.Sc. in Edu.	Lorain
Theresa Ellene Slavosky, B.A. (Ohio Wesleyan University).....	Sardinia
Cecil Edwin Smith, B.S. in Edu. (Kansas State Teachers College).....	Yates Center, Kan.
Retha Carolyn Smith, B.A. (Ohio Wesleyan University).....	Galion
Jane Warden Steenson, B.A.	Columbus
Lawrence Charles Stingel, Ph.B. (The College of Wooster).....	Ontario
Ferdinand Fairfax Stone, B.A.	Urbana
Irving Joseph Stone, B.A., B.Sc. in Bus. Adm.	Columbus
Marion Henry Struble, A.B. (Wittenberg College).....	Columbus
Donald Forest Summers, B.Sc. in Bus. Adm.	Zanesville
George Durban Talbot, B.S. (University of Wisconsin).....	Chardon
Emile Villemeur Telle.....	Toulouse, France
Pryor Brown Timmons, A.B. (University of New Mexico).....	Clarksburg
Elbert Wesley Tischendorf, B.S. in Edu. (Kent State College).....	Painesville
Lee Allen Toney, B.S. in Edu. (Ohio University).....	North Kenova
Ting Hsuan Tu, B.C.S. (China National Central University).....	Shanghai, China
Charles Ross Van Eman, B.S. (The College of Wooster).....	Columbus
Helen Sigrid Vorman, B.Sc. in Edu.	Lorain
Odell McField Washington, A.B. (Virginia Union University).....	Lynchburg, Va.
Harold Dodson Weaver, A.B. in Edu. (Howard University).....	Washington, D. C.
Cleon Earl Webb, A.B. (Ohio Wesleyan University).....	Worthington
Mary Clark Webster, A.B. (Cedarville College).....	Clifton
Henry Daniel Welty, B.Sc. in Edu.	Bluffton
Abram Gerhard Wiens, A.B. (Bluffton College).....	Lindenau, Russia
Lloyd Wilcox, B.Sc. in Soc. Adm.	Columbus
Frederick Ludwig Will, A.B. (Thiel College).....	North Lima
Frances Emily Williams, B.A.	Columbus
Mary Lee Williams, A.B. in Edu. (West Virginia Collegiate Institute).....	Charleston, W. Va.
Wendell Marion Williams, B.S. (Mount Union College).....	Canton
Janice Margaret Work, B.A.	East Cleveland
Florence Mougey Worrell, B.Sc. in Bus. Adm.	Columbus
Joseph Hall Wortham, A.B. (Howard University).....	Henderson, N. C.
Lawrence D. Yost, B.A. (Drake University).....	Des Moines, Ia.
Franklin McKinnon Young, B.S. (Otterbein College).....	Columbus
Iola Zeckhauser, B.A.	Columbus
Earl E. Zeisert, B.Sc. in Agr.	Brookville
Charles Bzael Zwelling, B.A.	Cleveland

(One hundred and eighty-two candidates)

MASTER OF ARTS IN SOCIAL ADMINISTRATION

Kenneth William Miller, A.B. (Oberlin College).....	East Northfield, Mass.
Herman William Rahn, B.A. (Ohio Wesleyan University).....	Cleveland
John DeForest Wellman, B.A. (Ohio Wesleyan University).....	Conneaut

(Three candidates)

MASTER OF SCIENCE

Henry Jackson Apple, B.Sc. in Agr.	Lima
Willis Russell Arn, B.S. (Ohio Northern University).....	Napoleon

Thelma Theon Baird, B.A.	Columbus
Clara Marie Baneroft, B.Sc. in H.E.	Columbus
David William Barnett, B.Sc. in Phar.	Louisville, Ky.
Ralph M. Benard, B.S. (Findlay College)	Rising Sun
Franklin Lewis Berger, A.B. (Ohio Northern University); B.S. (University of Chicago)	Ada
Helen Lucille Chrysler, B.S. (Denison University)	Columbus
Paul Enoch Clark, B.A. (Muskingum College)	Cambridge
Tilford William Cocks, B.S. (Agricultural and Mechanical College of Texas)	Silsbee, Texas
Elmer William Cook, B.S. in Chem. Engr. (University of Arkansas)	Buckner, Ark.
Thomas Kyle Cowden, B.Sc. in Agr.	Hickory, Pa.
Carlos Lowe Crum, B.S. (Wilmington College)	Sinking Spring
Adolph Ferdinand DeWerth, B.Sc. in Agr.	North Olmsted
Harold Carl Esper, B.Sc. in Agr.	Columbus
Grace Althea Essex, B.Sc. in H.E.	Cumberland
Raymond William Fischer, B.A.	Dayton
Paul John Flory, B.S. (Manchester College)	New Paris, Ind.
Alice Isabelle Ford, B.Sc. in Edu.	London
Madeline Clarke Foreman, B.S. (Howard University)	Columbus
Roscoe Whitlock Franks, B.Sc. in Agr.	Columbus
Ralph Orlando Freeland, B.S. in Edu. (Eastern Illinois State Teachers College)	St. Francisville, Ill.
Harold Theodore Fullerton, B.A.	Huntsville
Minerva Harbage, B.A. (Ohio Wesleyan University)	London
Ervin Merritt Herrick, B.Sc. in Agr.	Twinsburg
Wilbur Rosencrants Hodges, B.A.	Delaware
Hyman Jaffe, B.A. (Western Reserve University)	Cleveland
Floyd Leroy Jeffries, A.B. (Ohio University)	Mendon
Lawrence Virgil Johnson, B.E. Physics	Columbus
Bruce Kester, D.V.M.	Dayton
Irwin Klein, B.Sc. in Agr.	Cleveland
Oscar Ray LeBeau, B.S. in Edu. (Kent State College)	North Canton
William James Madison, D.D.S.	Xenia
Francis Joseph Markey, B.I.E., B.M.E.	Lewisburg
Edward David Martin, D.V.M.	Reynoldsburg
John Louis Mooney, B.S. (State Agricultural College of Colorado)	Denver, Colo.
Robert Charles Moser, B.E.E.	Columbus
Ralph Nolan Pyrtle, B.S. (Syracuse University)	Wilberforce
Josephine Randall, A.B. (Cedarville College)	Cedarville
Robert William Rothrock, B.Ch.E.	Washington C. H.
Clarence Eldo Rowland, B.Sc. in Agr.	Columbus
Milton Schantz, A.B. (Bluffton College)	Greenwich
Nellie Maude Shawver, A.B. (Defiance College)	Paulding
Norwood Rarason Shields, B.S. Agr. (Cornell University)	Wilberforce
Ober Carter Slotterbeck, B.A.	Chardon
Karl Franklin Smith, B.S. (University of Michigan)	Newark
Foster Merrill Stephens, B.E. Physics	Columbus
John Christopher Thompson, B.Sc. in Agr.	Columbus
Owen Albert Thompson, B.Ch.E.	Columbus
Orville Louis Young, B.S. in Agr. (Purdue University)	Germantown

(Fifty candidates)

CANDIDATES FOR TWO DEGREES

Julia Mae Estelle McCarty	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Kathleen Overmyer	Lindsey
Bachelor of Arts	
Bachelor of Science in Education	

(Two candidates)

THE OHIO STATE UNIVERSITY

COLLEGE OF AGRICULTURE

Acting Dean: HARRY CLIFFORD RAMSOWER

BACHELOR OF SCIENCE
IN AGRICULTURE

Franklin Robert Greeneisen	Garfield
Arnauld Haspil	Port Au Prince, Haiti
James Alfred Kennard	Pennsville
James Andrew Reed	Senecaaville
Edward Rudolph Smith	Waverly

(Five candidates)

BACHELOR OF SCIENCE
IN HOME ECONOMICS

Helen Beatrice Basinger	Columbus Grove
Juanita Ruth Foster	Granville
Celia Harriet Greene	Canton
Ruby Marian Dort Mills	Cuyahoga Falls
Bernice Elaine Myers	Cleveland
Pauline Valcenuia Schoner	Hartville
Angela Barbara Seikel	Dover
Elizabeth Christina Spengler	Piqua
Ruth Olus Suter	Waterville
Pauline Florence Thomas	Selma
Mary Marjorie Tootle	Mt. Sterling

(Eleven candidates)

COLLEGE OF ARTS AND SCIENCES

Dean: WALTER J. SHEPARD

BACHELOR OF ARTS

Joseph Wilford Adkins	Circleville
Alfred Orris Aulabaugh	Dayton
William Albert Ballare	Cleveland
Wealtha Adelaide BeVier	Columbus
John Quincy Brown	Columbus
David Clifton Bryant, Jr.	Bowling Green
Max Hyman Burstein	Hartford, Conn.
Bertha Eva Caldwell	Chillicothe
Mildred Alida Cassidy	Monclova
Mary Christianson	Butler, Pa.
Charles Martin Cummings	Columbus
Rhea Rae Davis	Columbus
Robert Judson Drake	Portsmouth
Lena Stafford Enright (with Honors)	Findlay
Ralph Vernon Everly	Galion
Annette Camille Farinacci	Cleveland
Paul Clayton Fortenbacher	Columbus
Emily Frances Furniss	Columbus
Justine Caroline Gehring, B.Sc. in Edu.	Elmore
Eleanor Veronica Givins	Toledo
Genevieve Marie Givins	Toledo
Frank Edward Hale	Bellevue
Jane Maudin Hewitt	Springfield
Lola Amanda Hukill	Brilliant
Edwin William Jones	Ravenna
Paul Martin Jones	Marion
Benjamin Goodwin Katz	Columbus
Ralph Wallace Kewish	Madison
Abraham Frederick Krivonos (with Honors)	East Cleveland
Marcus Jacob Lieberman	Youngstown
Samuel Lustig	Cleveland
Louis George Lytton	Cleveland

*Julia Mae Estelle McCarty	Columbus
Thomas Linn McCullough	Zanesville
Carl Nessler	Cleveland
*Kathleen Overmyer	Lindsey
Helen Partlow	Welch, W. Va.
Adah Hubbard Porter	Windham
William Kouns Robinson	Washington C. H.
Frances Lenore Rocker	Cleveland
Ralph E. Rosenberg	Detroit, Mich.
Virginia Caine Rutledge	Newark
Jacob Rapheal Schwartz	Paterson, N. J.
Rhea Frances Smith	Cleveland
Paul Frederick Strother	Columbus
McKinley Taylor	Cleveland
Alfred Deo Troxel	Arcanum
Henry Turkel	Cleveland Heights
George Willard Watt	Key
George Fred Weber, Jr.	Celina
Henry Weiner	Cleveland
Carolyn Jean Whitcomb, B.Sc. in Edu.	Columbus
David Yamshon	Cleveland

(Fifty-three candidates)

COLLEGE OF COMMERCE AND ADMINISTRATION

Acting Dean: FELIX E. HELD

BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION

Bruce Allen Alexander	Dayton
Raymond Spencer Beach	Orrville
Herbert Franklin Bond	Cumberland
Robert James Brown	Middletown
Walter Child Burnham	Milford Center
Norman Roberts Cawein	Hamilton
George Wilson Condit	Tontogany
Robert Baker Coram	Columbus
Constance Geneva Curtis	Marietta
Richard Emmett Davis	Columbus
George Frederick Fischer	Columbus
Selma Louise Fraas	Columbus
Wilbur Lloyd Gephart	Fremont
Harold Leslie Griffith	Newton Falls
Bruce Monroe Harner	McClure
Chester Elwood Heppberger	Atwater
Stewart Wayland Herman	Cleveland
Robert Clements Houk	New Castle, Pa.
Opal Louise Howard	Edgerton
William Lloyd Howell	Jackson
Andrew Christian Johnson	Cleveland
Jay Edward Jones	Jackson
Carl Bryce Keslar	Columbus
Gale Rexford King	Canal Winchester
Paul Gearhart Korn	Jackson Center
Lee Stacy Landsittel	Columbus
Donnelly John McNutt	Toledo
Paul Eugene Metz	Canton
Jane Bower Milholland	Wilkinsburg, Pa.
Glenn Leland Milner	Swift
John Paul Owen	Columbus
William Willard Rush	Greenville
Ulysses Grant Sain	Dayton
Martin Wesley Schryver	Columbus
Florence Shapero	Cleveland

* Two degrees.

Edwin Hayes Shrimpton	Columbus
Kermit Charles Sitterley	Canal Winchester
Frances Ruth Lenhart Smith	Columbus
Roy Edwin Stone	Cincinnati
Don Ewart Van Voorhis	Mt. Vernon
Thomas Theodore Vradelis	Middletown
Lawrence Virgil Weed	Columbus

(Forty-two candidates)

BACHELOR OF SCIENCE
IN JOURNALISM

Kenneth E. Amsberry	Milo, Ia.
John Richard Burkhart	Cleveland Heights
Solomon Gimplin	Cleveland
Anita Ruth Gutman	Cincinnati
George Allen Harding	Montpelier
Byron Charles Wilson	Columbus
Florence Lee Winkle	Sardinia

(Seven candidates)

BACHELOR OF SCIENCE
IN SOCIAL ADMINISTRATION

Avis Myra Ansley	Bellefontaine
Freda Isabel Balo	Dresden
Florence Bernice Goldman	Cleveland
Lillian Dora Harris	Columbus
Allen Birt Osber	Utica, N. Y.
Ethel Rita Slaman	Lakewood

(Six candidates)

COLLEGE OF DENTISTRY

Dean: HARRY M. SEMANS

DOCTOR OF DENTAL SURGERY

David Roy Katz	Cleveland
Paul Peter Rutsky	Cleveland
Howard Almon Sprague	Lakewood
Volney English Thomson	Portsmouth
Lowell Eugene Treece	Arlington

(Five candidates)

COLLEGE OF EDUCATION

Acting Dean: E. E. LEWIS

BACHELOR OF SCIENCE
IN EDUCATION

Robert Mahlon Atkinson	Trenton, N. J.
Virginia Mae Axline	Columbus
Anna Kathryn Baker	Columbus
Sarah Ellen Barclay	Columbus
John Russell Barnes	Ada
Ruth Mildred Beard	Columbus
Paul Edward Beck	Columbus
Raymond Anderson Bird	Millersburg
Lemuel Carlyle Bland	Columbus
Wilber Floyd Bolen	Lilly Chapel
Lawrence Marion Borst	Woodstock
Ruth Willson Brice	Cleveland
Opal Flora Cary	Kileville
Gertrude Adele Chandler	Waynesville
Melba McLaughlin Cole	Caldwell

Blanche Elizabeth Copp	West Alexandria
Sarah Florence Copp	West Alexandria
Berne Davis, B.A.	Columbus
Henrietta Kenney Davis	Columbus
Mabel Irene Davis	Columbus
Walter Carl Dress	Richville, Mich.
Virginia Elizabeth Duffy	Toledo
Mary Elizabeth Evans	Dresden
Doris Hulda Fuge	Columbus
Helen Gatch	Columbus
Rachel Lois Gatchell	Cleveland
Herbert Louis German	Fostoria
Florence May Gifford	Erie, Pa.
Marion Eleanor Gildard	Solon
Alison Adams Grubb	Columbus
James Ralph Hadley	Columbus
Mona Rae Hanks	Salida, Colo.
Harriet Eva Harris	Antwerp
Mildred Hannah Hecker	Prospect
Helen Marie Hennessey	Columbus
Hallie Marie Herman	Vanlue
Helen Gertrude Hirscher	Findlay
Mary Elizabeth Houser	Germantown
Charles Jackson Hupp	Bridgeport
Herbert Edmund Hutchinson	Columbus
Alice May Johnson	Stryker
Adah Florence Kelso	Greenfield
Alexander Reaves Kerr	Radnor
Edgar Earl Kidwell	Alliance
Frieda Marie Klingler	Junction City
Jacob Rudolph Koenig	Wapakoneta
Clara Lancione	Bellaire
Melvin Albert Laub	Napoleon
Mildred Edith Lewis	Hamilton
Constance Loomis	Columbus
Thomas Scott Lowden, Jr.	Columbus
Mary Esther MacWilliam	Bellevue
Judith Beatrice Manheim	Canton
Helen Hartman Manly, A.B. (Southern College)	Columbus
Joseph Harrison Mardis	East Liverpool
Thelma Faye Martin	Columbus
Floyd Waldo Mathers	Cambridge
William Robert McAlpin, A.B. (Miami University)	Bainbridge
*Julia Mae Estelle McCarty	Columbus
Leon William Mertz	Findlay
Mabel Black Miller	Springfield
Fred Kerr Mills, Jr.	Gallipolis
Catharine Edith Mitchell	Columbus
Clark Baker Morgan	Columbus
Margaret Cornelia Myers	Martins Ferry
John Jay O'Brien	Woodcliffe, N. J.
*Kathleen Overmyer	Lindsey
Lola Irene Overmyer	Lindsey
Virginia Christine Parker, B.A. (Ohio Wesleyan University)	Columbus
Bertha Davis Paulin	Columbus
Ina Boal Peebles	Columbus
Genevieve Dorothy Pettit	Tiro
Francis Rall Pierce, B.A.	Columbus
Ruth Elizabeth Reed	Barberton
Mary Alice Wilson Rickenbacher	Columbus
Thelma Louisa Ringgenberg	Mendon
Margaret Lodema Roller	Findlay
Sigmund Schnall	Cleveland
Allice Jean Scott	South Bend, Ind.

Kathryn Elizabeth Seybold, B.A. (Carnegie Institute of Technology)	Martins Ferry
Martha Jeannette Shaw	Alliance
Grace Elma Shimer	Youngstown
Florence Kathryn Smith, A.B. (Marshall College)	Defiance
Thomas Franklin Smith	Thivener
Bernard Rudolph Snodgrass	Toledo
Hartley Deal Snyder	Columbus
Anna Elizabeth Spence	Chillicothe
Vivian Esther Strait	Zanesville
Forrest Jenner Taylor	Malta
Janet Daisy Thomas	Columbus
Florence Naomi Trautman	Georgetown
Dorothy Mary Tredway	Warsaw
Lena Matilda VanDorn	Pataskala
Blodwen Watkins	Lima
James Arthur Wiggins	Moxahala
Irma Mae Wright	Cleveland
Mae Estella Wynkoop	Mt. Vernon
Murray Alexander Young	Fort Recovery
Loretta Amelia Zettler	Columbus

(Ninety-nine candidates)

COLLEGE OF ENGINEERING

Acting Dean: WILLIAM D. TURNBULL

BACHELOR OF ARCHITECTURE

James Howard Jacobson	Columbus
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(One candidate)

BACHELOR OF CHEMICAL ENGINEERING

William Bodine Abele	Zanesville
Thomas William Elslager	Dayton
James Theodore Mellott	Uhrichsville
Waldron Devol Sheets	Marietta
Gilbert Thomson	Columbus

(Five candidates)

BACHELOR OF CIVIL ENGINEERING

Kenneth Halterman Brust	Columbus
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(One candidate)

BACHELOR OF ELECTRICAL ENGINEERING

George Nathan Pardonner	Middletown
Frederick Daniel Witmer	Woodville

(Two candidates)

BACHELOR OF MECHANICAL ENGINEERING

Joseph Ernest Trimbur	Niles
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(One candidate)

BACHELOR OF METALLURGICAL ENGINEERING

Howard Joseph Humberstone	Columbus
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(One candidate)

BACHELOR OF SCIENCE
IN APPLIED OPTICS

George Adelbert Dye	Wooster
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(One candidate)

DECEMBER CONVOCATION

GRADUATE SCHOOL

Dean: WILLIAM MCPHERSON

DOCTOR OF PHILOSOPHY

Clarence Jay Black, B.S., M.A. (Kenyon College)	Danville
Glenn William Blaydes, A.B. (Indiana University); M.A.	Columbus
Albert Wade Elliott, B.A. (Ohio Wesleyan University); A.M. (University of Chicago)	Mt. Vernon
Joseph Wheaton Gill, B.A., B.Cer.E.	Port Clinton
Robert Benson Gordon, B.Sc. in App. Opt., M.Sc.	Columbus
Roy Edwin Graves, B.S. (Vanderbilt University); M.S. (Louisiana State University)	Utica, Miss.
Joe Wiseman Howland, B.S. (Denison University); M.Sc.	Plain City
Lucian Francis Hunt, B.S. (Coe College); M.A.	Cedar Rapids, Ia.
James Lloyd Hupp, B.Sc. in Edu.; M. A. (Columbia University)	Columbus
Eugene Gillespie Kelsheimer, B.S. (University of Illinois); M.S. in Ent. (Iowa State College of Agriculture and Mechanic Arts)	Oak Harbor
Anell Earl Moody, B.A., M.A.; A.M. (Columbia University);	Bedford
Lester Henry Munzenmayer, A.B. (Hanover College); M.A.	Columbus
Herbert Tirrill Osborn, B.A.; M.A. (University of Illinois)	Columbus
Carolyn Grace Shover, B.A., B.Sc. in Edu., M.A.	Columbus
Lorene Teegarden, B.Sc. in Edu., M.A.	Columbus
Negley King Teeters, A.B. (Oberlin College); M.A.	Steubenville

(Sixteen candidates)

MASTER OF ARTS

Edward Lehr Bailey, B.S. in Edu. (Ohio Northern University)	Elyria
Grace Ballenger, B.S. in Edu. (Muskingum College)	New Concord
Dorothy Beise, B.Sc. in Edu. (University of Minnesota)	Columbus
Virginia Stevens Britton, A.B. (Capital University)	Columbus
Mildred Hooker Brode, Ph.B. (University of Vermont)	Columbus
Fean Turner Camp, A.B. (Otterbein College)	Columbus
John Cortez Cooper, A.B. (Lincoln University)	Excelsior, W. Va.
Robert Bradley Craig, B.Sc. in Edu.	Columbus
James Carlton Dockeray, B.A. (Ohio Wesleyan University)	Columbus
Anthony Dolezal, B.Sc. in Edu.	Columbus
Ray Evans Dyer, A.B. (Rio Grande College)	Toledo
George Leist Ebenhack, B.A. (Ohio Wesleyan University)	Delaware
Louis William Georges, B.Sc. in Phar. (University of Notre Dame)	Marcus, Ia.
Paul Staley Goodell, B.Sc. in Edu.	Columbus
Virginia Rita Gunn, B.Sc. in Edu.	Columbus
William Arthur Hackett, A.B. (Cornell College)	Berea, Ky.
George Burrell Hammond, Ph.B. (Kenyon College)	Danville
William Floyd Hughes, A.B. (Marietta College)	Waterford
Shui-Chen Hung, B.A. (Shanghai College of Law)	Juian, Chekiang, China
Francis Zen Tshang Koo, B.S. in Com. (Northwestern University)	Shanghai, China
Ray Lambert, B. S. (Mount Union College)	Dover
Melvin Parsons Loy, A.B. (Marshall College)	Huntington, W. Va.
Paul Henry Masoner, B.A.	Uhrichsville
Ray Leroy McCleary, A.B. (Ohio Northern University)	Ada
Olive Wallace McGinnis, B.S. in Edu. (Muskingum College)	Zanesville
Jay William McKee, A.B. (University of the City of Toledo)	Monclova
Robert James O'Leary, B.A.	Ashtabula
Siang O'Yang, B.A. (Peiping National Normal University)	Tien Chang, Anhwei, China
Louise Mary Paulman, B.S. in Edu. (Kent State College)	Mingo Junction
Derrill Raymond Place, A.B. (Wabash College)	Herkimer, N. Y.
Stuart Croft Powers, B.Sc. in Agr.	Ashley
John Alden Purinton, Jr., Sc.B. in Chem. (Brown University)	Washington, D. C.
Marie Ropeteer, A.B. in Edu. (Rio Grande College)	Gallia
Samuel Henry Schwartz, B.A.	Columbus
William Christian Schwarzbek, A.B. (Wittenberg College)	Ney
Lester Earl Seitz, B.Sc. in Edu.	Circleville
Richard Herman Smith, B.Sc. in Bus. Adm.	Sandusky

THE OHIO STATE UNIVERSITY

John Calvin Stanley, A.B. in Edu. (Marshall College)	Wayne, W. Va.
Dwight Lyman Strausbaugh, A. B. (Rio Grande College)	Hilliards
Roger Barton Warner, B.Sc. in Agr.	Ashley
Joseph McNary Welch, B.A. (Muskingum College)	New Concord
Piao Yun Yao, LL.B. (China National Central University)	Pingyun, China
I-Ho Zee, B. of Com.Sc. (Chinan University, China)	Shanghai, China
Esther Rosetta Zurcher, B.A., B.Sc. in Edu.	Wilmot

(Forty-four candidates)

MASTER OF SCIENCE

Paul Franklin Bechberger, B.E.E.	Norwalk
Jack Compton, B.S. (Howard College)	Linden, Ala.
David Haigh Dawson, B.S. in Chem. Engr. (Drexel Institute of Arts, Science and Industry)	Philadelphia, Pa.
Walter David Ford, B.Cer.E.	Columbus
William Rau Haden, B.S. (Agr.) (University of Delaware)	Haddonfield, N. J.
James Godfrey Haub, B.S. (Capital University)	Columbus
George David Johnston, B.A. (Ohio Wesleyan University)	Delaware
Joseph Adelbert Martz, B.Cer.E.	Columbus
Margaret Anne McCloud, B.A.	Columbus
Louise Salisbury, B.A.	Rossmoyne
George Henry Spencer-Strong, B.Cer.E.	Sandusky
Helen Ann Strow, B.Sc. in H.E.	Milton Center
Monroe Thomas Vermillion, B.S. in Edu. (Ohio University)	Sherritts
Harry Raymond Weimer, A.B. (Manchester College)	North Manchester, Ind.
Richard Edward Wolfe, B.E.	Clyde

(Fifteen candidates)

COLLEGE OF AGRICULTURE

Acting Dean: EDGAR N. TRANSEAU

BACHELOR OF SCIENCE
IN AGRICULTURE

Ervin Francis Coleman	Berlin Center
Herman Henry Harrison	Columbus
Hayes Matchett Herschler	Columbus
Melvin Otho Kennedy	Martel
John Robert McKinnie	Delaware
Charles Jacob Peterson	Wilmington
Theron Joseph Repp	Chardon
Hutson Sterling Smith	West Mansfield
Harriet Wright Smythe	Utica
Ralph Van Buren	Forest
Frederick Woods Wing	Columbus
Sam Leon Yablok	Columbus
Paul Joseph Zwerman	Kimball

(Thirteen candidates)

BACHELOR OF SCIENCE
IN HOME ECONOMICS

Jaunita Vernadine Becker	Warner
Sara Colville	St. Louisville
Alice B. Conway	Pataskala
Hortense Hedges Gaskell	Duval
Doris Louise Long	Centerburg
Mary Estelle Monger	Columbus
Dorothy Evelyn Renner	Columbus
Mary Maxine Walser	Somerset
Maybelle Wise	Ashland

(Nine candidates)

COLLEGE OF ARTS AND SCIENCES

Dean: WALTER J. SHEPARD

BACHELOR OF ARTS

Paul Raymond Adams.....	Portsmouth
Robert Douglas Cameron.....	Columbus
Mary Lucille Caudill.....	Morehead, Ky.
Sara Jane Deyo.....	Columbus
Frank Joseph Drabek.....	Cleveland
Leonard Otto Duhn.....	Cleveland
Andre Gleyzal	Cleveland
Alison Adams Grubb, B.Sc. in Edu.....	Columbus
Paul Matthew Hummel.....	Columbus
Marion Fredericka Jaeger.....	Columbus
Richard Paul Jones.....	Venedocia
Robert Palmer Kelly.....	Zanesville
Louis Al Lame.....	Cleveland
LeFever Mackey Lee.....	Bellevue
Babette Harris Levy.....	Shreveport, La.
Grace Jo Ann MacDonald.....	Marietta
Alexander Stanislaus Mack.....	Boston
Clarid Fee McNeil.....	Columbus
Celia Esther Mooers.....	Bowling Green
James Richard Moscato.....	Yorkville
George Edward Nye.....	Pomeroy
June Burrill Pankhurst.....	Toledo
Mabel Lee Price.....	Richmond, Va.
Gladys Marie Pryor.....	Columbus
Anna Pauline Scott (with Honors and with Distinction in English).....	Huntington, W. Va.
Martin Andrew Sheetz.....	Bucyrus
Sara Elizabeth Slesnick.....	Canton
Max M. Soiffer.....	Philadelphia, Pa.
David Lorn Taylor.....	Delaware
John Augustus Vargo.....	Cleveland
John Nelson Von Derau.....	Dayton
Oscar Charles Wagner.....	Sandusky
E. Vincent Weinberg.....	Cleveland
Charlotte Louise Whiteford (with Honors).....	New Philadelphia
Robert Archibald Wilkins.....	Delta
George Virgil Wing.....	Worthington

(Thirty-six candidates)

COLLEGE OF COMMERCE AND ADMINISTRATION

Dean: WALTER C. WEIDLER

BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION

Margaret Jane Andrew.....	Dayton
John Leonard Arnold.....	Beaver Falls, Pa.
Gilbert Victor Blanquart.....	Columbus
Margaret Schille Bobb.....	Columbus
Russell Henry Bruot.....	Toledo
Richard Walker Caslow.....	Canal Winchester
Nicholas DeJoy	Willoughby
LeRoy Christian Dubs.....	Canton
Jerome Francis Enright.....	Columbus
Harry Conner Ernst.....	Cincinnati
William Jacob Fitting	Erie, Pa.
Henrietta Foster	Columbus
Ellen Fulmer	Cleveland Heights
Leonard Sanford Garrard.....	Columbus
Harold Stanley Goldman.....	Columbus
Chester Earl Hanover.....	Marion

Harold Dolby Harroun.....	Cleveland
Sumner Lewis Henderson.....	Columbus
Milliam Montgomery Hicks.....	Columbus
Edward Walton Holbrook.....	Orange, N. J.
Ralph Hugo Idle.....	Wapakoneta
Harry Leonard Jacobson.....	Cleveland
David Taylor Lee.....	Columbus
David Lowery	Youngstown
James Clifford Lucas.....	Bethesda
Ella Allen McCarley.....	Columbus
Russell Bernard Mechling.....	Glenford
George Edward Murray.....	Columbus
Thomas Noel Osborn.....	Columbus
Nelson Crandall Pabst.....	Youngstown
Charles Louis Sattler.....	Findlay
Paul Frederick Scheiderer.....	Columbus
Ida Schlansky	Columbus
Carl George Schwenkmeyer.....	Cincinnati
George Leonard Shai.....	Marietta
Donald Joseph Smith.....	Salem
John Arnett Smith.....	Willard
John Mike Snyder.....	Columbus
Sylvester Sheldon Stiverson.....	Delphos
Robert Lerton Young.....	Uniontown, Pa.

(Forty candidates)

BACHELOR OF SCIENCE IN JOURNALISM

Eloise Johnson Crawmer.....	Columbus
Arthur Giles Cummings.....	Cleveland
Curtiss Welt Oakes.....	Columbus
Theodore George Thress.....	Zanesville
Eleanor Benbow Willcox.....	Columbus

(Five candidates)

BACHELOR OF SCIENCE IN SOCIAL ADMINISTRATION

Dorothy Lucille Bantz.....	Barberton
Helen Virginia Beck.....	Wheeling, W. Va.
Ruth Helen Gordon.....	Columbus
Faith Miriam Tomlinson.....	Waynesville

(Four candidates)

COLLEGE OF EDUCATION Dean: GEORGE FREDERICK ARPS

BACHELOR OF SCIENCE IN EDUCATION

Dorothy Christina Adkins.....	Circleville
Sylvia Lee Bogatin.....	Columbus
Ruth Reay Dolezal.....	Columbus
Marie Fischer	Wheeling, W. Va.
Marcella Rosaline Gaeb.....	Norwood
William Howard Ketcham.....	Collins
William Gerald Lange.....	Salineville
Lillian Wilhelmina Luthanen.....	Painesville
Irene Ellen Matthews.....	Lakewood
Kathryn McGuire	London
Agnes Caroline McQuigg.....	Pomeroy
Una Purdue Miller.....	Westerville
Ruth Evelyn Millisor.....	Marion

Charlotte Suzanne Patenaude.....	Cleveland
Ruth Alice Perkins.....	Sharon, Wis.
Maceo Virginia Pollard.....	Columbus
Jean Elizabeth Reed.....	Columbus
Ida Marian Sandstrom.....	Conneaut
Jeannette Ann Sculler.....	Columbus
Dorothy Elizabeth Wells, B.A.....	Columbus
Earle Eugene Wilson.....	Lilly Chapel
William Dunn Wing, B.A.....	Columbus
(Twenty-two candidates)	

BACHELOR OF FINE ARTS

John Garner Kemper.....	Bremen
(One candidate)	

COLLEGE OF ENGINEERING

Dean: EMBURY A. HITCHCOCK

BACHELOR OF ARCHITECTURE

Ernest Wildermoth Stuart.....	Portsmouth
(One candidate)	

BACHELOR OF ARCHITECTURAL ENGINEERING

Austin Eldon Knowlton.....	Bellefontaine
(One candidate)	

BACHELOR OF CERAMIC ENGINEERING

Joseph Hilary Chilcote.....	Columbus
Clarence Leroy Evans.....	Steubenville
William Odo Hug.....	Canton
Joseph Reese Safford.....	Columbus
Robert Thomas Weiser.....	Columbus
(Five candidates)	

BACHELOR OF CHEMICAL ENGINEERING

Robert Aloysius Glasser.....	Bellaire
Warren Ernest Mehnert.....	Vermilion
John Emil Toppari.....	Ashtabula
(Three candidates)	

BACHELOR OF CIVIL ENGINEERING

William Balderston Stockton.....	Cadiz
(One candidate)	

BACHELOR OF ELECTRICAL ENGINEERING

Russell Wilson Steenrod.....	Maplewood
(One candidate)	

BACHELOR OF ENGINEERING IN MINING

Edward Woodrow Waller.....	McDermott
(One candidate)	

BACHELOR OF INDUSTRIAL ENGINEERING

Elwood Winton Geyer.....	Columbus
Albert Holland Kelso.....	Youngstown
Donald Masson.....	Youngstown
Harold Lee McKee.....	Warren
Lancelot Allen McKnight.....	Columbus
Walter B. Olnhausen.....	Bowling Green
Theodore Edman Smith.....	Akron
(Seven candidates)	

THE OHIO STATE UNIVERSITY

BACHELOR OF MECHANICAL ENGINEERING

William Bernard Burlingame.....	Warren
Hal Boyer McNichols.....	Columbus
(Two candidates)	

BACHELOR OF METALLURGICAL ENGINEERING

James Robert Blanchard.....	Millersburg
Fred Clinton Hart.....	Austinburg
(Two candidates)	

COLLEGE OF PHARMACY

Dean: CLAIR A. DYE

BACHELOR OF SCIENCE
IN PHARMACY

Benjamin Cohen	Cleveland
Carl Edward Windisch.....	Sandusky
(Two candidates)	

COLLEGE OF VETERINARY MEDICINE

Dean: OSCAR V. BRUMLEY

DOCTOR OF VETERINARY MEDICINE

Edward Carl Heinsen.....	Port Clinton
(One candidate)	

MARCH CONVOCATION

GRADUATE SCHOOL

Acting Dean: M. BLAKEMORE EVANS

DOCTOR OF PHILOSOPHY

Willis Carter Beasley, A.B., M.A. (University of Missouri).....	Columbus
John Edward Gran, B.S., M.A. (Wesleyan University).....	Columbus
George Franklin Knowlton, B.S., M.A. (Agricultural College of Utah).....	Logan, Utah
Herman Moe Roth, B.S. in Engr., M.S. (University of Virginia).....	Richmond, Va.
Floyd Orvill Russell, B.A. (Defiance College); M.A.....	Columbus
Marjorie Knowlton Snively, B.A., M.A.....	Columbus
Margery Katherine Walker, B.A., M.S. (University of Washington).....	Elma, Wash.
Carl DeWitt Washburn, B.A., M.A.....	Columbus
(Eight candidates)	

MASTER OF ARTS

Ruth Elizabeth Burkey, B.A.....	Columbus
Arthur Melton Chavous, B.Sc. (University of Illinois).....	Wilberforce
Kathryn Virginia Comstock, B.Sc. in Edu.....	Columbus
John William Davis, B.Arch.....	Mt. Gilead
Weldon Elroy Diller, A.B. (Bluffton College).....	Pandora
Cecil Oren Dudley, B.Sc. in Bus. Adm.....	Columbus
Ward Campbell Halstead, A.B. (Ohio University).....	Portsmouth
Helen Williams Harmon, B.Sc. in Edu.....	Columbus
Frances Catherine Henning, B.Sc. in Edu.....	Stryker
John Frederick Hussell, A.B. (Marshall College).....	Huntington, W. Va.
Hazel Tice Johnson, B.Sc. in Edu.....	Hillsboro
Harold William Kennedy, B.Sc. in Agr.....	Martel
Ira Helser Latimer, B.A.....	Columbus
Rhea Dawn Logan, B.A.....	Columbus
Mary Ripple Needham, A.B. (Otterbein College).....	Westerville
Horatia Dodson Nelson, B.Sc. in Edu.....	Columbus

Martin Newell Ramsay, B.S. in Edu. (Ohio University).....	Columbus
Helen Mary Rice, A.B. (Oberlin College).....	Oberlin
Robert Fross Rinehart, A.B. (Wittenberg College).....	Springfield
Homer Sims, A.B. (Muskingum College).....	New Concord
Roland Beatcher Smith, B.Sc. in Bus. Adm.....	Cleveland
Mary Campbell Speaker, A.B. (University of Louisville).....	Columbus
Louise Neely Stewart, A.B. (Denison University).....	Zanesville
Marion Amy Thomas, B.Sc. in H.E., B.Sc. in Edu.....	Columbus
Malcolm Roderick Turner, A.B. (Cedarville College).....	Cedarville
Julius Rudolph Weinberg, B.A.....	Zanesville

(Twenty-six candidates)

MASTER OF SCIENCE

Myron Vernon Anthony, B.Sc. in Agr.....	Louisville
Eber Cecil Barr, B.S. (Mississippi Agricultural and Mechanical College).....	Newton, Miss.
John McLaughlin Boyd, B.S. (Mount Union College).....	Alliance
Alvin Broerman, D.V.M.....	New Bremen
Ross Webster Brubaker, B.Sc. in Agr.....	Toledo
Gladys Scott Cook, B.Sc. in Edu.....	Cambridge
Ralph Willard Dean, B.Sc. in Agr.....	East Cleveland
La Vaughn Dennison, B.S. (Bethany College).....	Wellsburg, W. Va.
Oliver Daniel Diller, A.B. (Bluffton College).....	Columbus Grove
Hannah Chandler Gallagher, B.A.....	Cleveland
Theodore Charles Green, B.S. (Pennsylvania State College).....	Wooster
Mary Krise Helz, B.A. (Ohio Wesleyan University).....	Columbus
Clayton Henry Huff, B.A., B.Sc. in Edu.....	Painesville
Robert Charles Innis, B.Sc. in Phar.....	Columbus
Franklin Glenn Liming, B.A.....	Bethel
Mildred Alverna Miller, B.S. in Edu. (Kent State College).....	Kent
Gustav Henry Poesch, B.S. in Agr. (Michigan State College of Agriculture and Applied Science).....	Monroe, Mich.
John Haas Sitterley, B.Sc. in Agr.....	Canal Winchester
John Daniel Strausbaugh, B.Sc. in Agr.....	Columbiana
Matthew Andrew Vogel, B.S. in Agri. (University of Illinois).....	Wooster
Carl Joseph Wallen, D.V.M.....	Closter
Clara Gertrude Weishaupt, B.Sc. in H.E.....	Lynchburg
Edward Howell Windle, B.M.E.....	Columbus

(Twenty-three candidates)

CANDIDATES FOR TWO DEGREES

Ruth Lenora Owen.....	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Wayne Weidner Trout.....	Columbus
Bachelor of Arts	
Bachelor of Science in Education	

(Two Candidates)

COLLEGE OF AGRICULTURE

Dean: ALFRED VIVIAN

BACHELOR OF SCIENCE
IN AGRICULTURE

James Rudolf Bachman.....	Wapakoneta
Seymour Edison Bailey.....	Newton Falls
Robert Clay Barre.....	Centerburg
James William Carrell.....	McConnelsville
Ralph McWilliams Crooks.....	Shiloh
Edward Thomas Deam.....	Springfield
Stanley Howard Diffenbacher.....	Dunlap
Walter Wolfe Finlay.....	Coshocton
Charles Kermit Good.....	Pataskala

Robert Edward Homberger.....	Sandusky
Loyal Hostetler	Smithville
Ralph William Hostetler.....	Smithville
Donald Truman Hover.....	Harrod
Jackson Eugene Hufford.....	Ansonia
Joe S. Kersey.....	Oregonia
Philip Mark Kohankie.....	Painesville
Lawrence Edward Kunkle.....	Springfield
Frank Gerald Leeper.....	Glouster
Julius Andrew Odegard.....	Bottineau, N. D.
Raymond Samuel Rickly.....	Bluffton
Frederic Ford Zehring.....	Germanatown

(Twenty-one candidates)

BACHELOR OF SCIENCE IN HOME ECONOMICS

Alma Elizabeth Boone.....	Wooster
Margaret Louise Friebeis.....	Columbus
Lois Myers	Pataskala
Helen Smith Patterson.....	Columbus
Emma Grace Walker.....	Columbus

(Five candidates)

COLLEGE OF ARTS AND SCIENCES

Dean: WALTER J. SHEPARD

BACHELOR OF ARTS

James Sherwood Borland.....	Kalamazoo, Mich.
Samuel Brain Braunstein.....	Youngstown
Bernard Phillip Bresin.....	Cleveland
Harry Frederick Lincoln Castle.....	Columbus
Dorothy Beedle Faulkner.....	Troy
Grady Cromwell Feaster.....	Columbus
Leon Nathaniel Goldensohn.....	Newark, N. J.
Leon Philip Goldstein.....	Columbus
Frances Elizabeth Goll.....	Lancaster
Ruth Smith Gonzolez de Maldonados.....	Jamestown
David Tressel Griggs (cum laude).....	Chevy Chase, Md.
Williard Harper.....	Wellston
William Howard Hicks.....	Columbus
Lloyd Harold Kest.....	Cleveland
Dolly Grace Krabill.....	Louisville
Lawrence Rudy Kumnick.....	Montpelier
Emerson Brown Laird.....	Ashtabula
Jacob Lasner.....	Brooklyn, N. Y.
James Fletcher Lorenz.....	Coshocton
Lawrence Kinsell Mahaffey.....	Columbus
Harry Edgar Marshall.....	Columbus
Charles Cable McManigal.....	Garrettsville
Logan Elwin Myers.....	Groveport
Helen Hilma Nissila.....	Ashtabula
*Ruth Lenora Owen (cum laude).....	Columbus
Mary C. Phillips.....	Ada
Sidney Roseff (cum laude).....	New York, N. Y.
Lewis Harry Roth.....	Cleveland
Elven Branch Royer.....	Powels, Wyo.
Herbert Irvin Sauer (with Distinction in Philosophy).....	West Alexandria
Asa Clem Scott.....	St. Paris
Doris Elizabeth Seeds.....	Columbus
Wayne Harold Shafer.....	Warren
Mildred Martha Shepard.....	Columbus
Russell Lowell Shively.....	Celina
Leanore Mae Siegel.....	Washington, Pa.

Michael William Silver.....	Paterson, N. J.
Florence Elizabeth Smith.....	Lancaster
Roland Bliss Snow.....	Marion
Rosamond Sterrett.....	Columbus
William George Stover.....	Massillon
Martha Roberts Styron.....	Columbus
Emily Greer Sullivan.....	Columbus
Fred Carl Trivisonno.....	East Cleveland
*Wayne Weidner Trout.....	Columbus
Ralph Sears Williams.....	Columbus

(Forty-six candidates)

COLLEGE OF COMMERCE AND ADMINISTRATION

Dean: WALTER C. WEIDLER

BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION

Lucius Franklin Arner.....	Boardman
Arthur Clement Bail.....	Loveland
Florence Edna Baird.....	Oberlin
Wayne Bliss Barrow.....	Lancaster
Ercile Chapman Eaton.....	Sullivan
Charles Clark Evans.....	Chillicothe
James Sylvester Few.....	Columbus
Kerr Wood Glassburn.....	Columbus
Barstow Lee Hanna.....	Cleveland Heights
Helen Louise Hicks.....	Columbus
Harold John Huffman.....	Chesterhill
Thomas Corwin Kerlin.....	Greenville
Owen Thomas McCloskey, Jr.....	Columbus
Elizabeth Harriet Miller.....	Columbus
Florence Poston.....	Columbus
Lloyd Elsworth Rousculp.....	Lima
Robert Lawrence Scheels.....	Columbus
Ralph Daniel Shively.....	Columbus
Fred Newell Thornborough.....	Warnock
Harold Alanson Westervelt.....	Columbus
Earl Frederick Williams.....	Warren
Eugene Robert Wilson.....	Toledo
Thomas Dale Newton Wilson.....	Youngstown
Alan Leo Ziskin.....	Cleveland

(Twenty-four candidates)

BACHELOR OF SCIENCE
IN JOURNALISM

Anna Ruby Kline.....	Toledo
Paul Joseph Steinberger.....	Columbus

(Two candidates)

BACHELOR OF SCIENCE
IN SOCIAL ADMINISTRATION

Ruth Kendall Richey.....	Columbus
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(One candidates)

COLLEGE OF EDUCATION

Dean: GEORGE FREDERICK ARPS

BACHELOR OF SCIENCE
IN EDUCATION

Jennie Barker.....	New Philadelphia
Catherine Elizabeth Bitzer.....	Cardington

* Two degrees.

Dilman Burnap Cole.....	Toledo
Saul Harry Dulberg, B.A.....	Clifton, N. J.
Edwin Norris Hughes.....	Columbus
Helen Dare Hummell.....	Carroll
Kathryn Hunter.....	Columbus
Charles Gilbert Keck.....	North Canton
Helen Amelia Martin.....	Ashley
Kathryn Brown Melton.....	Columbus
Anabel Miller.....	Columbus
Theodore Roosevelt Nelson.....	Shelby
Alice Catherine Nuzum.....	Mohawk Village
*Ruth Lenora Owen.....	Columbus
Philip Stern Persky.....	Cleveland
Robert Roosevelt Reilly.....	Newark, N. J.
James Henry Rowland.....	Columbus
Mildred Ruth Rudnick.....	Cleveland
Helen Margueritte Starling.....	Pennsville
Robert Russell Stillwell.....	Chillicothe
Uldena Rosaleen Stowe.....	New Lexington
*Wayne Weidner Trout.....	Columbus
Ruth Sarah Truax.....	Lewistown
Mary Virginia Woodyard.....	Columbus

(Twenty-four candidates)

COLLEGE OF ENGINEERING

Dean: EMBURY A. HITCHCOCK

BACHELOR OF ARCHITECTURE

Elmer Ellsworth Haney.....	Dalton
Frank Joseph Piehler.....	Dayton
Charles Wilbur Porter.....	Youngstown
Edward Michael Toth.....	Cleveland

(Four candidates)

BACHELOR OF ARCHITECTURAL ENGINEERING

Robert Richard Cutler, B.A. (Marietta College).....	Belpre
Charles Leroy Fosnaugh.....	Dayton
Ikumaro Nishimoto.....	Yawata, Hiroshima, Japan
Eugene Frank Poling.....	Mansfield

(Four candidates)

BACHELOR OF CHEMICAL ENGINEERING

Carl William Lundgren.....	Akron
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(One candidate)

BACHELOR OF CIVIL ENGINEERING

Lawrence Fenner BeVier.....	Wellington
Henry Demboski.....	Ravenna
Robert Bennie Hindman (as of the Class of 1931).....	Columbus
Curtis Emerson LeMay.....	Columbus
William Ray Miller.....	Norwalk
Samuel Copeland Pritchard.....	Columbus
Kenneth Brady Woods.....	Greenville

(Seven candidates)

BACHELOR OF ELECTRICAL ENGINEERING

Norbert Emil Fuchs.....	Put-in-Bay
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(One candidate)

BACHELOR OF ENGINEERING PHYSICS

Eugene Mahurin Kile.....	Peoria
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(One candidate)

* Two degrees.

BACHELOR OF ENGINEERING IN MINING

Foster Burton Moore.....	Columbus
(One candidate)	

BACHELOR OF INDUSTRIAL ENGINEERING

Howard B. Jordan.....	Xenia
Clifford Christopher Ritter.....	Columbus
Robert Ernest Wagenhals.....	Canton
(Three candidates)	

BACHELOR OF METALLURGICAL ENGINEERING

James Gibson Bair.....	Oakmont, Pa.
Lester Lloyd Luxon.....	New London
James Merritt Ruckman, B.S. in Ch. E. (Ohio Northern University).....	LaRue
Austin Wilbur Secoy.....	Lancaster
George Syble Stafford.....	Norwalk
Cecil Van Gundy.....	Columbus
Gordon Ritter Worthen.....	Springfield
(Seven candidates)	

COLLEGE OF PHARMACY

Dean: CLAIR A. DYE

BACHELOR OF SCIENCE
IN PHARMACY

Jack Stuart Grushcow.....	Cleveland
Robert Parker Racer.....	Columbus
(Two candidates)	

JUNE CONVOCATION

GRADUATE SCHOOL

Dean: WILLIAM MCPHERSON

DOCTOR OF PHILOSOPHY

Derwin Willoughby Ashcraft, D.V.M., M.Sc.....	Columbus
Hubert Emerson Bice, B.A., M.A.....	Syracuse, N. Y.
Fred Corry Bishop, B.S., M.S. (Colorado Agricultural College).....	Dallas, Tex.
Edward Paul Breakey, B.Sc., M.A. (University of Kansas).....	Columbus
Nathaniel Charles Burhans, B.S. (Iowa State College); M.S. (University of Wisconsin).....	Columbus
Wendell Holmes Camp, B.S., M.Sc.....	Columbus
Thomas Charles Chadwick, B.Ch.E., M.Sc.....	Columbus
Tod B. Galloway Dixon, B.Ch.E., M.Sc.....	Columbus
John Huntley Dupre, B.A., LL.B., M.A.....	Worthington
Walter Philip Elhardt, B.Sc. in Agr., M.A.....	Columbus
Robert Anderson Fisher, B.Ch.E., M.Sc.....	Pittsburgh, Pa.
Harry Ludwig Gui, B.S., M.S. (Kansas State Agricultural College).....	Wooster
Weston Andrew Hare, B.S. (Municipal University of Akron).....	Akron
Lydia, Anna Jahn, B.A., M.A.....	Mantua
Grace Emily Jameson, B.A. (The College of Wooster); M.A.....	Wooster
John Solomon Kegg, A.B., M.A. (Defiance College).....	Columbus
Maurice Curtis Langhorne, B.A., M.A. (Washington and Lee University).....	Smithfield, Va.
Liang Ching Li, B.S. (Nankai University); M.Sc.....	Peking, China
Edward Gibson Locke, B.S. (Oregon State Agricultural College); M.Sc.....	Portland, Ore.
Bernard Sterling Mason, A.B. (University of Michigan); M.A.....	Columbus
John Allen Miller, A.B. (Ashland College); M.Sc.....	Columbus
William McLennan Morgan, B.Sc. in Chem. (University of Illinois); M.Sc.....	Norwood
Mildred Ratliff Newlin, A.B. (Earlham College); M.Sc.....	Richmond, Ind.
Ola Floyd Nixon, A.B. (Indiana University); A.M. (University of Chicago).....	Columbus
L. A. Parker, B.S. in Engr. Chem. (Georgia School of Technology); M.Sc.....	Columbus

Corliss Lloyd Parry, B.A., M.A.	Jackson
Hugo Karl Polt, A.B. (New York State College for Teachers) ; M.A. (Syracuse University)	Cleveland
George Thomas Rankin, B.A. (Muskingum College) ; M.Sc.	Cambridge
Robert Ray Scott, Ph.B. (Hiram College) ; A.M. (Columbia University)	Buckhannon, W. Va.
Lucile Douglas Smith, A.B. (Transylvania College) ; M.A. (Johns Hopkins University)	Columbus
Frank John Soday, B.S. in Chem. Engr. (Grove City College) ; M.Sc.	Grove City, Pa.
Ignatius John Wernert, B.A., M.S. (State University of Iowa)	Algona, Ia.
Francis Jesse Williams, B.S. in Cer. Engr. (Alfred College)	Elmira, N. Y.
Shou-Chen Yang, M.S. (University of Illinois)	Hsien, Liao-Ning, China

(Thirty-four candidates)

MASTER OF ARTS

Lillian Mae Alspaugh, Ph.B. (University of Chicago)	Columbus
Harold Frederick Amrhein, B.A. (Ohio Wesleyan University)	Delaware
Carl Ludwig Anderson, B.S. in Edu. (Kansas State Teachers College of Emporia)	Osage City, Kan.
Waldo Clifford Ault, B.A.	Willshire
Lawrence Edward Baldwin, Ph.B. (Denison University)	Columbus
Marguerite Allen Bartlett, Ph.B. (Franklin College)	Columbus
Anne Katherine Bartram, B.A.	Columbus
Mary Evelyn Baumgardner, B.A. (Ohio Wesleyan University)	Marietta
William Thomas Bean, B.S. (Allegheny College)	Franklin, Pa.
Frederick Kenneth Berrien, A.B. (Colgate University)	Hightown, N. J.
James Alexander Byrd, B.E.E.	Lancaster
Albert F. Cameron, B.Sc. in Edu.	Carroll
Donald William Coddington, A.B. (Ohio Northern University)	LaRue
Charles Treber Collins, B.S. in Edu. (Miami University)	Oxford
Frank Stephen Cross, B.A. (Ohio Wesleyan University)	Delaware
Marguerite Fullerton Danner, B.Sc. in Edu.	Columbus
Francis William Davis, B.E.E.	Cleveland
Amiel Otto Dehn, B.A. (The University of the City of Toledo)	Oak Harbor
Kenneth Dwight Detling, A.B. (Miami University)	Ansonia
Nellie May Drummond, A.B. (West Virginia Wesleyan College)	Buckhannon, W. Va.
Kathryn Hall Duffey, B.A., B.Sc. in Edu.	Dayton
Harriet James Eaton, A.B. (Radcliffe College)	Kitchener, Ont., Can.
Mary Elizabeth Evans, B.Sc. in Edu.	Dresden
Clarke Leslie Foster, A.B. (Park College)	Columbus
Bernadine Allison Fouch, B.Sc. in Soc. Adm.	Columbus
Mary Marguerite Gaal, B.Sc. in Edu.	Columbus
Rebecca Beatrice Garbe, B.A.	Toronto, Ont., Can.
Alma Josephine Garber, A.B. (Ashland College)	Ashland
Robert Hassler Gerhard, A.B. (Franklin and Marshall College)	Lancaster, Pa.
Mary Edmonds Gerlaugh, B.Sc. in Dom. Sci.	Columbus
Dorothy Getz, B.A.	Columbus
Edith Nuber Gibbs, B.A., B.Sc. in Edu.	Columbus
Dora Eunice Giffen, B.A. (Muskingum College)	New Concord
Nathan Ginsburg, B.A.	Marietta
Mildred Mary Goerlich, A.B. (Heidelberg College)	Marion
Emelie Rachel Goodwin, A.B. (Capital University)	Columbus
Mary Naomi Goodwin, B.A. (The College of Wooster)	Lebanon
Esther Lucille Grant, B.A. (Ohio Wesleyan University)	Defiance
Frederick Tasney Greene, B.Sc. in Bus. Adm.	Columbus
William Chamberlin Hale, B.S. in Com. (Milligan College)	Erwin, Tenn.
Hyman Hanson, B.A.	Akron
Alice Bockstahler Harris, B.L., B.A. (Ohio Wesleyan University)	Marion
Roy Clifford Harrison, A.B. (Central Normal College)	Westerville
Nellie Maude Hastings, B.A. (Muskingum College)	Cedarville
George Elliott Hatfield, B.Sc. in Edu.	Columbus
Cosette Willison Hempstead, B.A. (Wellesley College)	Columbus
Catherine Elizabeth Hennessey, B.A.	Columbus
Robert Homer Hilliard, B.A., B.Sc. in Edu.	Laurelville
Theophil Fred Hotz, A.B. (Heidelberg College)	Columbus

Jui Yun Huang, B.Sc. in Soc. Adm.	Hunan, China
Robert Norris Hughes, B.A.	Columbus
Clair Martel Hughey, A.B. (Ohio University)	South Salem
Mary Gwendolyn Jenkins, B.Sc. in Edu.	Oak Hill
Julius Joseph Kaiserman, M.A.	Ashville
Louis Kaplan, B.S. (University of Chattanooga)	Cincinnati
Harry Bernard Ketter, B.A.	Mantua
Earl Lawrence Knight, B.S. in Com. (Temple University)	Amherst, Mass.
Anna Heaton Kuntz, B.A.	Columbus
Claire Lenila Thomas Laing, B.A. (West Virginia University)	Columbus
Marjorie Leffler, A.B., (Miami University)	Kyle
Ralph Gleo Lenfesty, B.S. in Edu. (Arkansas State Teachers College)	Peru, Ind.
Martha Elizabeth Lindsay, B.A.	Cleveland
Emelia Littlefield, B.A.	Columbus
George Townsend Lodge, A.B. (Oberlin College)	Cleveland Heights
Robert Emerson Lowry, B.A.	Columbus
Dorothy Seville Martin, B.A.	Columbus
Thelma Faye Martin, B.Sc. in Edu.	Columbus
Marie Katherine Mason, A.B. (Canisius College)	Columbus
Stanley William McClure, B.S. in Edu. (Miami University)	Harrison
Mae Isabella McCrory, B.S. (Western Reserve University)	Bucyrus
Christine Meek, A.B. (Marshall College)	Catlettsburg, Ky.
Isao Mikami, B.A.	Tokio, Japan
Bruce Robert Morris, B.A. (Western Reserve University)	Girard
Robert Alvern Morton, A.B. (Heidelberg College)	Tiffin
William Earl Murray, A.B. (Virginia Union University)	Marion
James Earl Newsome, A.B. (Ohio University)	Wilberforce
Emory Norris, B.A.	Harrisburg
Ernest Bayard Oberlitzner, B.S. (Ohio Northern University)	Deshler
Bertha Davis Paulin, B.Sc. in Edu.	Columbus
Walter Smith Petry, B.Sc. in Edu.	Columbus
Arthur Warren Phelps, B.A. (Washington and Lee University)	Cincinnati
Jeanne Bradford Phillips, B.Arch.	Columbus
Emmett Delorus Preston, Jr., A.B. (Howard University)	Washington, D. C.
Mary Louise Ralston, Ph.B. (Denison University)	Newark
Thomas Delmont Reese, B.S. in Bus. Adm. (University of Southern California)	Columbus
Margaret Alice Riale, B.A. (The College of Wooster)	Wooster
Sylvia Richards, B.A. (Ohio Wesleyan University)	Willard
Floyd Oliver Rittenhouse, B.A. (Emmanuel Missionary College)	Mt. Vernon
Carl Walter Robinson, B.S. in C.E. (Case School of Applied Science)	Cleveland
James LeRoy Rogers, B.S. (Wittenberg College)	Springfield
Sam Rosenfeld, Jr., B.A.	Columbus
Manuel Santiago, B.A.	Ponce, P. R.
Irene Bertha Schultze, B.S. in Edu. (Ohio University)	Dayton
Edward Christian Simmons, B.A.	Pittsburgh, Pa.
Margaret Lucile Sittler, A.B. (Wittenberg College)	Columbus
Robert E. Smith, B.S. in Edu. (Central Missouri State Teachers College)	Warrensburg, Mo.
Russell Breneman Smith, B.A. (Ohio Wesleyan University)	Crestline
Lois Marie Sproull, A.B. (Pennsylvania College for Women)	Hamilton
Sophia Stambaugh, B.A. (Western Reserve University)	Youngstown
Samuel Morris Steward, B.A.	Columbus
Donald Robert Swan, B.S. (University of the City of Toledo)	Toledo
Mildred Aileen Thomas, A.B. (Mount Union College)	Alliance
Minnie Evelyn Thomas, A.B. (Ohio University)	Cheshire
Marion Louise Thompson, B.Sc. in Edu.	Columbus
Harold Voorhise Tipton, B.S. in Edu. (Ohio University)	Lancaster
Ralph Herman Trivella, B.Sc. in Edu.	Columbus
Samuel Ch'eng Hsien Tung, B.Sc. in Bus. Adm.	Kweiyang, Kweichow, China
Katherine Bartlett Usry, B.Sc. in Edu.	Columbus
Philip Sidener Waldeck B.Sc. in Edu.	Woodstock
Harold Nevada Walter, A.B. (Indiana University)	Akron
Frederick Alexander Waterman, B.Sc. in Edu.	Pataskala
Adolph David Weinberger, B.A.	Columbus

Leonard Burt Wilder, A.B. (Baldwin-Wallace College).....	Berea
Helen Lucille Williams, A.B. (Denison University).....	Pataskala
Anna O'Hear Williamson, B.Sc. in Edu.	Wilberforce
Robert Edgar Wilson, A.B. (Miami University).....	Cleveland
John Kirk Windle, A.B. (Denison University).....	Newark
Katherine Izora Wollam, B.Sc. in Edu.	Columbus
Albert Ernest Wright, A.B. (Cedarville College).....	Xenia
Earl Ott Wright, B.Edu. (University of Akron).....	Akron
Grace Elaine Wyman, B.A. (Ohio Wesleyan University).....	Painesville
James Carleton Yocum, B.Sc. in Bus. Adm.	Massillon
Shui Ying Yu, B.A. (National Wu-Han University).....	Iwhang, Kiangsi, China
(One hundred twenty-four candidates)	

MASTER OF SCIENCE

William Bodine Abele, B.Ch.E.	Zanesville
William Harrod Adrian, B.Arch.E.	Columbus
Howard M. Aitken, D.V.M.	Columbus
Karl G. Bambach, B.A.	Toledo
Alberta Ethel Banner, B.Sc. in Edu.	Columbus
Charles Llewellyn Bernier, B.S. in Ind. Chem. (University of Montana).....	Helena, Mont.
Ethel Bickham, B.Sc. in H.E.	Clifton, La.
Joseph Donnally Blickle, B.Sc. in Agr.....	Ironton
James David Bohn, B.S. (Pennsylvania State College).....	Boalsburg, Pa.
Marybodine Busey, B.Sc. in Phar.	Springfield
Arthur Glenn Chapman, B.S. (Iowa State College of Agriculture and Mechanical Arts)	
	Martinsville, Ill.
John Rodgers Clifton, B.C.E.	New Holland
Frank Alexander Cowan, B.A. (North Texas State Teachers College).....	Frisco, Tex.
Frank Sylvester Curto, B.Sc. in Agr.	Pittsburgh, Pa.
George Leroy Dick, B.Sc. in Edu.	Cleveland
Samuel Clarkson Ellis, A.B. (Wittenberg College).....	Xenia
Edwin John Fellows, B.Sc. in Phar.	Lima
Theodore Clinton Fitzgerald, D.V.M.....	Canal Winchester
John Robert Forsythe, B.S. (Thiel College).....	Columbus
Amberky Georgidse .....Kutais, Georgia, Kaukasus, Russia	
Elmer William Greve, B.Sc. in Agr.	Cleveland Heights
William James Grubbs, Jr., B.M.E.	Columbus
Charles Ernest Hall, B.S. in C.E. (Rutgers University).....	New Brunswick, N. J.
Amor Edward Hancock, D.V. M.	Williamsport
John Frederick Harper, B.S. in Edu. (Miami University).....	Pleasant Plain
Elmer Louis Hartman, B.S. in Agr. (Texas Technological College).....	Lockney, Texas
Arnauld Haspil, B.Sc. in Agr.	Port-au-Prince, Haiti
Paul George Herold, B.Cer.E.	Columbus
Sydney Hawtrey Holloway, B.Vet. Sc. (University of Toronto).....	Winnipeg, Man., Can.
Amos Grant Horney, A.B. (Earlham College).....	Columbus
Stanley Philip Jay, B.E.E.	Columbus
Paul Vernon Jewell, B.S. in Electrochem. Engr. (Massachusetts Institute of Technology)	
	Cambridge, Mass.
Paul Russel Jones, B.Cer.E.	Columbus
Earl Cassidy Kirk, B.Met.E.	Kent
Evangeline Ruth Klepinger, B.Sc. in Edu.	Dayton
LeFever Mackey Lee, B.A.	Bellevue
Eldon Paul LeGrand, B.Sc. in Agr.	Oak Hill
Salvatore Michael Marco, B.M.E.	Cleveland
Albert Curtis Miller, B.A.	Columbus
Grover Cleveland Musgrove, B.S. in Agr. (West Virginia University).....	Coshocton
Bernard Myron Newman, A.B. (Oberlin College).....	Cleveland
Arnold Theodore Nordsieck, B.A.	Indianapolis, Ind.
Michael Monserrate Parker, B.S. (Cornell University).....	Virginia Beach, Va.
Harold Everett Pinches, B.A. (Ohio Wesleyan University).....	Delaware
Ivan Albert Planck, B.Ch.E.	Warren
William Donald Preston, A.B. (Wittenberg College).....	Springfield
Carl Henry Rapp, B.S. (University of Illinois).....	Milford, Ill.
Leonard Robert Richardson, D.V.M.	Akron

Reginald James Ritter, Ch.E. (Lehigh University).....	Bethlehem, Pa.
Herbert John Rolke, B.Cer.E.	Columbus
Earl Irving Rosenblum, B.Sc. in Phar.	Columbus
Howard Eugene Russell, B.A.	Ashland
Alan Cartwright Secord, B.V.Sc. (Ontario Veterinary College).....	Kirkfield, Ont., Can.
Waldron Devol Sheets, B.Ch.E.	Marietta
Ralph Walter Sherman, B.Sc. in Bus. Adm.	Thornville
Carl Edwin Smith, B.S. (Iowa State College of Agriculture and Mechanic Arts).....	Batavia, Ia.
Robert Mumford Smock, B.Sc. in Agr.	Erie, Pa.
William Charles Stahl, B.S. (Virginia Polytechnic Institute).....	Blacksburg, Va.
John Gordon Steele, B.S. (Pennsylvania State College).....	Wooster
Arthur John Stupka, B.Sc. in Agr.	Cleveland
Claude Randolph Taylor, B.S. (Tufts College).....	Columbus
Karl Vernon Taylor, B.C.E.	Columbus
Ernest John Teichert, B.Met.E.	Columbus
Belden Smith Tucker, B.C.E.	Dayton
Carl Ernest Venard, B.A.	Loveland
Fritz Volkmar, D.V.M.	Columbus
Clifford Christian Wagner, D.V.M.	Cleveland
Milton Henry Waldschmidt, B.Cer.E.	Columbus
Alfred Nelson Watson, B.A.	Columbus
John Edward Wells, B.A. (University of Mississippi).....	Greenville, Miss.
Oliver Henry Mansfield Wilder, B.S. in Agr. (Purdue University).....	Wooster

PROFESSIONAL DEGREES

COLLEGE OF ENGINEERING

Dean: EMBURY A. HITCHCOCK

ARCHITECT

Ruth Elizabeth Morris, B.Arch. 1924	Columbus
(One candidate)	

CERAMIC ENGINEER

Roy DeWitt Beck, B.Cer.E. 1926	West Lafayette
(One candidate)	

ELECTRICAL ENGINEER

George Warren Hoddy, B.E.E. 1926	Springfield
Wirt Stanley Scott, M.E. in E.E. 1911	Mansfield
Harley Munhall Ward, B.E.E. 1921	New York, N. Y.
(Three candidates)	

MECHANICAL ENGINEER

Samuel Reid Beitler, B.M.E. 1920	Columbus
Paul Bucher, B.M.E. 1919	Columbus
George William Burrell	Cleveland
Daniel Robert Croft, B.M.E. 1926	Columbus
Eugene Field Dawson, B.M.E. 1921	Norman, Okla.
Ivan Frank Zarobsky, B.M.E. 1927	Toledo
(Six candidates)	

COLLEGE OF LAW

Dean: HERSCHEL W. ARANT

JURIS DOCTOR

John Robert Jones, B.Sc. in Bus. Adm.	Columbus
Lorentz Bennett Knouff, A.B. (Otterbein College).....	College
Brandon Grey Schnorf, A.B. (The University of the City of Toledo).....	Toledo
Louis Wexler, A.B. (The University of the City of Toledo).....	Toledo
(Four candidates)	

BACHELOR OF LAWS

James Vincent Armogida, B.A.	Canton
Forrest Blizzard Ashcraft, B.A.	Newark
George Howey Barnard, B.Sc. in Bus. Adm.	West Salem
John Bender, B.A.	Fostoria
William Willis Wray Bevens	Beaver
Cecil Stanley Blair, B.A. (Ohio Wesleyan University)	Chillicothe
Jack Bosch, A.B. (Ohio University)	Hamilton
Alfred Francis Brindley, Jr.	Kenton
Mark Thomas Brown	Hamilton
William Cullen Bryant	Columbus
Milton Warren Buffington, B.A.	Columbus
Wendell Vaughn Butcher	Powhatan Point
Lozier Caplan, A.B. (The University of Akron)	Salem
George H. Chamblin, B.A.	Columbus
Forrest Edward Clifford Claypool	Chillicothe
Francis Joseph Collopy, A.B. (Wilmington College)	Washington C. H.
Arthur Bainbridge Cunningham, A.B. (Wittenberg College)	New Philadelphia
John Franklin Darby, B.Sc. in Bus. Adm.	Wauseon
Charles Randolph Darnell, B.Sc. in Bus. Adm.	Cincinnati
*John Lodwick Davies, Jr.	Columbus
Walter Russell Davis, B.A.	Reinersville
*Harry Joseph Dworkin	Cleveland
Edward Long Garrett, B.A.	Zanesville
Noel Fisher George	Ottawa
Rafael Gonzalez de Maldonados, B.A.	Columbus
Darold Irving Greek	Kunkle
Emanuel William Greenblatt	Cleveland
Isadore Milton Harris	Toledo
Alvin Neil Haulund	Maumee
Michael Harry Holliday, B.A.	East Youngstown
William Douglas Howell	Lakewood
*William James Hunter	Columbus
James Wellor Igo	Hillsboro
Raphael Garland Jeter	Akron
Albert Kivowitz Kaye, B.Sc. in Econ. (University of Pennsylvania)	Youngstown
Ellis Wehrly Kerr, B.A. (Ohio Wesleyan University)	Troy
Henry James Knapke	Celina
Francis Harover Lang, B.A. (Ohio Wesleyan University)	Manchester
James Walter Lang, Jr., B.A. (Ohio Wesleyan University)	Manchester
Frank Kaufman Levin	Lorain
Edward Tiberio Lombardo	Columbus
Harold Thomas Lutz, A.B. (Ohio University)	Mansfield
Luke Hudson Lyman, B.Sc. in Bus. Adm.	Columbus
John Merrick McElroy	Columbus
James Paul McNamara	Upper Sandusky
Donald Clement Miller, B.A.	Lancaster
Phillip Arthur Millstone, B.A.	Youngstown
Ellsworth Alfred Moats, B.Sc. in Bus. Adm.	Waverly
Lionel Orville Moore, A.B. (Washington and Jefferson College)	Steubenville
David Edwin Morgan, B.A. (University of Michigan)	Columbus
Robert Watkins Newlon, B.A.	Columbus
James Robert Nichols, B.A.	Columbus
Ellsworth Elmer Pegg, B.A.	Columbus
John David Pincura, Jr., B.A. (Pennsylvania State College)	Lorain
Lawrence Albert Ramey	Hilliards
Robert Rutledge Richards, B.A.	Camp Chase
Walter Denslow Sauer	Marietta
Jacob Wolfe Scholnik	Canton
John Ewing Smith, B.A.	Jackson Center
Franklyn Elwin Stearns	North Olmstead
Vernon Lemar Stouffer, B.A.	Columbus
Richard Pinkerton Swift, B.A. (Ohio Wesleyan University)	Canton

* Two degrees.

Louis Tobin, B.A.	East Liverpool
Chester Tuschman	Toledo
Robert Cleland Tyler	Columbus
Robert Hirst Wead, B.A.	Xenia
Manning Drew Webster, B.Sc. in Bus. Adm.	Pomeroy
Norman Leonard Weisman, B.A.	Dayton
Frank Edward Wilkinson	Crestline
*Thomas White Young	Columbus
Luella Zehner	Oak Harbor
Max Irwin Ziskind	Columbus

(Seventy-two candidates)

COLLEGE OF MEDICINE

Dean: JOHN H. J. UPHAM

DOCTOR OF MEDICINE

John Rupert Alley	Chillicothe
Temple August Baldi	Cleveland
Lester Dean Besecker	Laura
*Byron Bennet Blank	Waynesville
George Peter Bohlender, B.A.	Dayton
Joseph John Brumbaugh, B.A.	Canton
Howard Ray Campbell	Dayton
James Heyward Carson	Martins Ferry
Stephen Philip Churchill	Lima
Chester Owen Cramer, B.A.	Amlin
David Myers Creamer, B.A. (Muskingum College)	Key
Theodore Cutright, B.A.	Lyndon
*Stanford Seward Daw	Wellsville
*Charles Joseph Dinardo	Cleveland
Rollin Ray Durant, B.A., M.Sc., Ph.D.	Columbus
Robert Karl Edler, B.A. (Ohio Wesleyan University)	Westerville
Richard Andrews Firmin, A.B. (Oberlin College)	Findlay
Harold James Friedman, B.A.	East Cleveland
Edgar Allen Fry	Columbus
*William Russell Gibson	Columbus
Jack Gilford, B.A.	Cleveland
Maurice S. Goldberg	Cleveland
*David Meyer Gordon	Columbus
Grant Ostrander Graves, B.A., M.A.	Columbus
John Burton Gravis	Canton
Robert Joseph Hansel, B.A.	Columbus
George Wesley Hauser, B.S. (University of Minnesota)	Columbus
Robert Wayne Helms, B.Sc.	Convoy
*Laurence Marion Ihle	Columbus
*Joseph Paul Ingmire	Union Furnace
Oscar Waldemar Jepson	Sunbury
Samuel Kamellin, B.Sc.	Cleveland
Ross Melville Knoble, B.A. (Western Reserve University)	Sandusky
Conrad Andrew Kuehn, B.A. (Ohio Wesleyan University)	Toledo
Henry Brush Lacey, B.A.	Columbus
*Orville Lee Layman	Germantown
*Norris Edward Lenahan	Columbus
Harry Herman Leuchtag, B.A.	Cleveland
Joseph Jacob Levin, B.A. (Western Reserve University) ; M.A.	Cleveland
Milton Auvrem Levine, B.Sc.	New Boston
Tom Franklin Lewis, Jr., B.Sc.	Columbus
Samuel Lobe, B.A. (Western Reserve University)	Cleveland
James William Long, B.Sc. (with Honors)	Columbus
William Francis Lyons, D.V.M.	Coshocton
Thomas Nicholas Manos	Newark
Chester Ray Markwood, B.Sc.	Lancaster

* Two degrees.

George Tilden Mathews	Columbus
John Bernard McLaughlin	Columbus
Umbert Alfred Melaragno, B.A. (Western Reserve University)	Cleveland
Orval Jerome Miller, A.B. (Defiance College)	Defiance
*Harold Mills	Clifton
Mervin Hur Mitchell, B.Sc.	Plain City
Dwight Miller Palmer, B.Sc. (with Honors)	Scio
*Crawford Francis Pope	Columbus
Avery Dana Powell, A.B. (Ohio Northern University)	North Baltimore
*Donald Ralph Printz	Urbana
Morris Sol Rosenblum	Youngstown
Howard Harmon Schwindt	Dover
Abe Obby Shapiro, B.A.	Cleveland
Clare William Smith	Columbus
Franklin Monnett Smith, B.A. (Ohio Wesleyan University)	Nevada
Harry Alva Smith	Painesville
Carl Stein, B.A.	Cleveland
William Vincent Stephenson	Bellevue
Frank Howard Sweeney	Galion
Harold Oswald Tagett	Batavia, N. Y.
Bernard Joseph Terrell	Cleveland
Myron Wendell Thomas, B.A. (Western Reserve University)	Cleveland
Roy Henry Thompson	Cleveland
John August Topinka, B.A. (Western Reserve University)	Cleveland
Walter Joseph Tymochko	Youngstown
Thomas Patrick Wangler, B.A.	Groveport
Harold Wheeler Ward, A.B. (Marietta College)	Marietta
Jerome Irving Wertheimer, B.A.	Cleveland
*Walter Estey Yingling	Lima

(Seventy-five candidates)

COLLEGE OF DENTISTRY

Dean: HARRY M. SEMANS

DOCTOR OF DENTAL SURGERY

Henry Webster Arbaugh	Columbus
Raymond Joseph Barry	Portsmouth
Benjamin Bernard Bell	Bellevue
Alan Perry Berry	Toledo
Alton Dean Brashear	Wellsburg, W. Va.
Kenneth Mensing Broesamle	Columbus
*Emanuel Caplan	Steubenville
Abe Samuel Chazen	Cleveland
Solomon Clark	Columbus
Jason Donald Damuth	Dayton
Frank Emil Dettling	Akron
David Edward Eckert	Columbus
Lester Lee Eichenauer	Celina
Nelson Robert Embrey	Pleasantville
Gentry Elbert Fields, B.S. in M.E., M.E. (Virginia Polytechnic Institute)	Columbus
Calvin Charles Garverick	Mansfield
Bernard Leon Grossman	Warren
Robert Paul Hankamer	Sandusky
*William Dickson Jacob Heintz	Columbus
Clarence Richard Hien	Mansfield
Morris Hyman Karmasin	Cleveland
Melvin L. Kirchhofer, A.B. (Bluffton College)	Dalton
John Francis Kitchton	Youngstown
Albert Henry Koch	Cincinnati
Henry Fred Albert Lange	Toledo
Samuel Lavine	Trenton, N. J.

* Two degrees.

James Edward McGuire	Toledo
William Conrade Myers	Worthington
Dennis A. Nabors	Newtown
Winston Baer Ocker	Cleveland Heights
George William Peters	Jackson
Paul Luther Schiff	Columbus
Marion Arlie Shaffer	Willard
Carleton Hutchinson Shank	Miamisburg
Robert S. Sigafos, B.A.	Columbus
Henry Lloyd Smith	Columbus
Lenore Sprague Stack, A.B. (Ohio University)	Columbus
Samuel Clancy Swerdlow	Columbus
Ben Taubman	Cleveland
Robert Struble Taylor	Mt. Healthy
George Richard Townsend	Toledo
Russell Joseph Uhl	Hamilton
Ross Edgar Wales	Youngstown
Joseph William Walsh	Cleveland
Delbert Oliver Waud	Uhrichsville
Donald Julius Weber	Mingo Junction
Donald Herman Webster	Columbus
Earl Joseph Welch	Columbus
Abram Raymond Weprin	Dayton
Harold O. Whitacre	Springfield

(Fifty candidates)

CANDIDATES FOR TWO DEGREES

Byron Bennett Blank	Waynesfield
Bachelor of Science	
Doctor of Medicine	
James Kirker Campbell, Jr.	Columbus
Bachelor of Architecture	
Bachelor of Architectural Engineering	
Emanuel Caplan	Steubenville
Bachelor of Science	
Doctor of Dental Surgery	
Sandy Crisafulli	Wadsworth
Bachelor of Arts	
Bachelor of Science in Education	
John Lodwick Davies, Jr.	Columbus
Bachelor of Arts	
Bachelor of Laws	
Stanford Seward Daw	Wellsville
Bachelor of Science	
Doctor of Medicine	
Virginia Franklin Dayton	Newark
Bachelor of Arts	
Bachelor of Science in Journalism	
Charles Joseph Dinardo	Cleveland
Bachelor of Arts	
Doctor of Medicine	
Harry Joseph Dworkin	Cleveland
Bachelor of Arts	
Bachelor of Laws	
Jean Elizabeth Ervin	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
William Russel Gibson	Columbus
Bachelor of Science	
Doctor of Medicine	
David Meyer Gordon	Columbus
Bachelor of Arts	
Doctor of Medicine	

Alice Jeannette Hayes	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
William Dickson Jacob Heintz	Columbus
Bachelor of Arts	
Doctor of Dental Surgery	
William James Hunter	Columbus
Bachelor of Arts	
Bachelor of Laws	
Laurence Marion Ihle	Columbus
Bachelor of Science	
Doctor of Medicine	
Joseph Paul Ingmire	Union Furnace
Bachelor of Arts	
Doctor of Medicine	
Orville Lee Layman	Germantown
Bachelor of Science	
Doctor of Medicine	
Norris Edward Lenahan	Columbus
Bachelor of Arts	
Doctor of Medicine	
Margaret Ann McDevitt	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Marjorie Marie Merz	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Christine Louise Meyer	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Harold Mills	Clifton
Bachelor of Science	
Doctor of Medicine	
Crawford Francis Pope	Columbus
Bachelor of Arts	
Doctor of Medicine	
Donald Ralph Printz	Urbana
Bachelor of Arts	
Doctor of Medicine	
Gertrude Agathe Rosen	Steubenville
Bachelor of Arts	
Bachelor of Science in Education	
John Schaffer	Dayton
Bachelor of Arts	
Bachelor of Science in Business Administration	
Harry Peter Snyder	Lorain
Bachelor of Industrial Engineering	
Bachelor of Mechanical Engineering	
Ralph Raleigh Van Atta	Newark
Bachelor of Electrical Engineering	
Bachelor of Mechanical Engineering	
Joseph Kenneth Walkup	Columbus
Bachelor of Arts	
Bachelor of Mechanical Engineering	
Eleanor Mae Wilbur	Columbus
Bachelor of Arts	
Bachelor of Science in Education	
Walter Estey Yingling	Lima
Bachelor of Arts	
Doctor of Medicine	
Thomas White Young	Columbus
Bachelor of Science in Journalism	
Bachelor of Laws	

(Thirty-three candidates)

BACCALAUREATE DEGREES

COLLEGE OF AGRICULTURE

Dean: ALFRED VIVIAN

BACHELOR OF SCIENCE

IN AGRICULTURE

Jose Balonquita Acebo.....	Solano, Nueva Vizcaya, P. I.
Truman Dewitt Arnold, B.Sc. (Wilmington College).....	Wilmington
Alvan Benjamin Augsburg.....	Pandora
Walter Robinson Baisler.....	Poland
Lewis Ward Baker.....	Worthington
Joseph Feurt Boynton.....	Haverhill
John Harold Brockschmidt.....	Cincinnati
Lee M. Cleland.....	Martinsville
William Evan Davies.....	Crafton, Pa.
Harold Clyde Dickerson.....	Trinway
Park Alexander Dimaline.....	Grafton
Pearl Carl Drenning.....	Lancaster
Merrel Quentin Elder.....	Warsaw
Lawrence Cornelius Holtkamp.....	New Bremen
Robert Willis Kerns.....	West Mansfield
Raymond Harlow King.....	Hilliards
Howard Francis Lillich.....	Apple Creek
Rowe Cleland Littleton.....	Kenton
Neal Hall Magee.....	Warren
Robert Hugh McCormick.....	Columbus
Solon Franklin McQueston.....	Lawrence, Mass.
Charles Earl Murphy.....	McArthur
Robert Nelson Neill.....	Venice
Samuel Augustus Patterson.....	Chesterland
Raymond Edward Richmond.....	Chesterland
Percy Lehr Rider.....	Grove City
Everett Glenwood Royer.....	Coshocton
J. Kenneth Samuels.....	Aultman
Paul John Schlotterbeck.....	Lewisburg
Alson Louis Siedel.....	Strongsville
Bernard Ellis Snider.....	Evansport
Clarence Wayne Snyder.....	Bremen
Charles Spitzer.....	Carey
Elmer Dean Steiner.....	Kenton
Edward Lloyd Truxal.....	Columbus
Hildred Harvey Warner.....	Woodstock
Herbert Frederick Williamson.....	Bainbridge
Wayne Eldrage Wilson.....	Malta

(Thirty-eight candidates)

BACHELOR OF SCIENCE
IN HOME ECONOMICS

Mildred Magdalene Axx.....	Hartville
Mildred Beach.....	Plain City
Helen Ann Bradfield.....	Westerville
Roxanna Sanford Brannan.....	Stryker
Vivian Lucille Chapman.....	Geneva
Dorothy Joan Converse.....	Unionville
Ruth Adelia Crockett.....	Metamora
Wilma Lucille Crommer.....	Pioneer
Sybil Eldora Dally.....	Columbus
Ruth Mary Durr.....	Bucyrus
Ruth Kathryn Emmons.....	Cincinnati
Mary Elizabeth Extine.....	Columbus
Evelyn Pauline Gordon.....	McConnelsville
Isabel Bertha Greunke.....	Toledo
Ruth Henrietta Groeniger.....	Columbus
Ellen Margaret Hachtel.....	Dundee

Ruth Elizabeth Holmes.....	Columbus Grove
Kathryn Elizabeth Jaklon.....	Columbus
Dorothy Della Kapp.....	Columbus
Wanda Louise Leasure.....	Zanesville
Mary Alice Lyon.....	Everett
Esther Eustacia McCormick.....	Sunbury
Iva Charlotte Millard.....	Oregonia
Marietta Ruth Montgomery.....	Columbus
Elva May Paul.....	Columbus
Lucile Salome Reuthinger.....	Toledo
Margaret Rockhold.....	Roundhead
Alma Caroline Rohe.....	Columbus
Lois Evelyn Rumburg.....	Seville
Marthel Ryan.....	Columbus
Rhoda Odora Sams.....	Columbus
Helen Elizabeth Schleppi.....	Westerville
Edress Eileen Schrack.....	Mansfield
Martha Ellen Shoenberger.....	Columbus
Garnet Evelyn Slagle.....	Springfield
Alice Pauline Southward.....	Circleville
Genevieve Stowe.....	Marion
Wilhelmina Josie Styles.....	Cleveland
Mary Catherine Swint.....	Fremont
Elizabeth Talley.....	Zanesville
Josephine Minnette Thompson.....	Columbus
Dorothy Ethyl Trees.....	Columbus
Helen Margaret Vogelsang.....	New Bremen
Cora Marie Wecht.....	Dalton
Margaret Eleanor Whitney, B.S. (Otterbein College).....	Westerville
Edith May Winans.....	Ellsworth
Clara Bell Zeune.....	Long Run
Mildred Irene Zurcher.....	Wilmot

(Forty-eight candidates)

COLLEGE OF ARTS AND SCIENCES

Dean: WALTER J. SHEPARD

BACHELOR OF ARTS

Sara Martha Abel.....	Columbus
Frances Jeanette Allard.....	Columbus
Charles Alvin Arbaugh.....	Columbus
Solomon Asch (cum laude).....	Brooklyn, N. Y.
Charles Richard Aukerman.....	Martins Ferry
Marian Louise Ault.....	Ironton
Marvin Fletcher Austin.....	Columbus
William John Awty.....	Charleston, Ill.
Andrew Barta (cum laude and with High Distinction in Sociology).....	Lorain
Abraham Arthur Barth.....	Paterson, N. J.
Mary-Leone Freund Basch (cum laude).....	Columbus
Myron Baumgartner.....	Dalton
Rose Beatrice Beck.....	Cleveland
Clyde Charles Beery.....	Columbus
William McNeil Bell.....	Akron
Thornton Irwin Boileau.....	Madeira
Clarence Harley Bowden.....	Zanesville
Catherine Ann Brennan.....	Columbus
Grace Nunemaker Brown.....	Columbus
Wilbur Thornly Bruce.....	Steubenville
Kenneth Edward Brumelle.....	Zanesville
Wilfred Lonzo Brunk.....	Lima
Floyd Henry Buckland.....	Columbus
Joseph Herbert Burns.....	Columbus
Glenn Camp.....	Akron

William Bennett Carnahan.....	Canton
Cecil William Chambers.....	Poland
Irven Horton Clements.....	LaRue
Kenneth Lynde Cochran.....	Mt. Vernon
Tressa Julia Cohen.....	Columbus
Eleanor Rose Cohn.....	Indianapolis, Ind.
Richard Lewis Counts.....	Chillicothe
Elizabeth Velma Crater.....	Columbus
*Sandy Crisafulli (cum laude and with High Distinction in French).....	Wadsworth
Boles Philip Cudnik.....	Cleveland
Florence Felhaber Dameron.....	Columbus
*John Lodwick Davies, Jr.....	Columbus
*Virginia Franklin Dayton.....	Newark
Richard Conklin Deeg.....	Columbus
Forder Franklin DeMuth.....	Hicksville
Walter Bernard Devine.....	Uhrichsville
John Russell Dick.....	New Holland
*Charles Joseph Dinardo.....	Cleveland
Ruth Doran.....	New Albany
Lloyd Lee Dowell.....	Bellefontaine
Dorothy Dumble.....	Columbus
Christy Harvey Dunn.....	Cannellville
*Harry Joseph Dworkin.....	Cleveland
Ruth Louise Dwyer.....	Columbus
Irving Jack Effrat (cum laude).....	Brooklyn, N. Y.
Samuel Epstein.....	Youngstown
*Jean Elizabeth Ervin.....	Columbus
Thomas Edgar Ervin (Summa cum laude and with High Distinction in Political Science).....	Columbus
Winifred Estrich (with High Distinction in History).....	Edon
Dorothy Frances Falkenstein.....	Columbus
John Whipple Fawcett.....	Mamaroneck, N. Y.
Jesse Joseph Fazekas.....	Lorain
Samuel Feinman.....	Massillon
Stanley Leonard Feldman.....	Cleveland
Louise Virginia Ferree.....	Columbus
Sam Friedmar.....	Toledo
August Adolf Gabriele.....	Steubenville
Arthur George Gardner.....	New York, N. Y.
Lyster Maccebee Gearhart.....	Allentown, Pa.
James Reviere Giffen.....	Columbus
Lawrence Daniel Gilboy.....	Youngstown
Philip Sidney Gold.....	Paterson, N. J.
*David Meyer Gordon.....	Columbus
John Earl Graham.....	Columbus
William Stone Guthrie.....	Columbus
Carl Harm.....	Columbus
Charles Robert Hathaway.....	Dayton
William Tracy Haverfield.....	Uhrichsville
*Alice Jeannette Hayes.....	Columbus
Ruth Jane Hedgcock.....	Dayton
Leo James Joseph Heil.....	Canton
*William Dickson Jacob Heintz.....	Columbus
Mary Elizabeth Henderson.....	Stearns, Ky.
John Reed Hennen.....	Columbus
Robert Otto Hergert.....	Bellevue
Florence Eulada Hetrick.....	Fremont
Frank Lott Higgs.....	Columbus
John Andrew Hindulak.....	Cleveland
George Reuben Hiskey.....	Bellevue
Mortimer Hochman.....	Brooklyn, N. Y.
Ruth Alice Hoey.....	Toledo
Charles Russell Holbrook, Jr.....	Ashland, Ky.

* Two degrees.

Esther Blanche Holbrook.....	Ashland, Ky.
Reuben Breene Hoover.....	Dayton
Joseph Eldon Horton.....	Berne
Paul Vernon House.....	Newark
Donald Emerson Hull (Summa cum laude and with High Distinction in Chemistry)...	Crooksville
*William James Hunter.....	Columbus
Abraham Julius Hurwitz.....	Cleveland
Ann Hurwitz.....	Dayton
Harriet Sylvia Hyman.....	Bluefield, W. Va.
*Joseph Paul Ingmire.....	Union Furnace
Herman Harry Ipp.....	Youngstown
William Stanley Ireton.....	Cincinnati
Melba Elverta Jackson.....	Ashley
William Philip Jenkins.....	Columbus
Louis Jilek.....	Cleveland
Harold Clifford Johnson.....	Mt. Vernon
Virginia Louise Johnson.....	Cleveland
Helen Trenwith Jones.....	Mt. Vernon
Sara Beth Jane Jordan.....	Rocky River
Saul Richard Kaplan.....	Brooklyn, N. Y.
Alice Katz.....	Buffalo, N. Y.
Karl Frederick Kaufman.....	Garfield Heights
Mary Elizabeth Kaufman.....	Columbus
Olive Wilmur Kennedy.....	Columbus
Henri Arthur Kerns.....	North Lewisburg
Marjorie Louise Kingsbury.....	Jackson Heights, N. Y.
Richard Alfred Koch.....	Cleveland
Beatrice Korosy.....	Alliance
Hyman Martin Krasny.....	Cleveland
Marvyn Lachinsky.....	Fremont
Peter Lancione.....	Bellaire
Theodore Floyd Lanning.....	Dennison
Anthony Lapolla.....	Niles
Lucille Loretta Lapolla.....	Niles
Samuel Charles Lavine.....	Trenton, N. J.
Everette Broadstone Laybourne (cum laude).....	Springfield
Arthur Walter Lee.....	Bellevue
*Norris Edward Lenahan.....	Columbus
James Linek.....	Cleveland
Marion Victor Lingle.....	Edon
Esther Mae Liokumovitz.....	Wapakoneta
Bernard Lipschitz.....	Newark, N. J.
Leonidas Franklin Livisay.....	Ironton
Frank Clarke Long, Jr.....	Columbus
Alan Bevington Loop.....	Columbus
Edward Joseph Lyons.....	Blanchester
William Robert MacConkey.....	Cambridge
Richard Henry MacCracken.....	Columbus
* Grace Dee Mahon.....	Steubenville
Robert Franklin Marlin.....	Cleveland
Henry Carl Marsico.....	Lorain
John Edward Martin.....	Columbus
Edward Glenn Mason, Jr.....	Ashland
Albert Guy Mayer, Jr.....	Dayton
Merney Jean McAlpine.....	Bellefontaine
Elizabeth Elliott McCaughey.....	Columbus
*Margaret Ann McDevitt.....	Columbus
John Vincent McEntee.....	Columbus
Francis William McPeck.....	Cambridge
*Marjorie Marie Merz.....	Columbus
*Christine Louise Meyer.....	Columbus
Shonnette Weil Meyer.....	New Orleans, La.
Jane Milar.....	New Philadelphia

* Two degrees.

Harry Fullerton Miller (cum laude)	East Akron
Louis Miller	Cleveland
Tobia Bayla Miller	Fort Worth, Tex.
Henry Roy Misrock	New York, N. Y.
Robert Ignatius Modica	Cleveland
Frances Ellen Montgomery	Columbus
Raymond Charles Moss (cum laude)	Zanesville
Evelyn Adele Nassau	Columbus
Marion Neill	Venice
Richard Arthur Niple	Columbus
Bernard Harmon Oakley (cum laude)	Maplewood
Sue Rita O'Brien	Canton
Paul Stephen Ocker	Cleveland
Walter Minoru Ozawa	Columbus
Robert Nation Park	Columbus
Doris Alice Parker	Ironton
John Fross Paton	Ashland, Ky.
Mary Elizabeth Paullin	Dayton
Leo Joseph Pesola	Mountain Iron, Minn.
Frederick Howald Pickering	Columbus
Adolph Piekietko	Newark, N. J.
*Crawford Francis Pope	Columbus
*Donald Ralph Printz	Urbana
Lucretia Warner Richison	Springfield
Samuel Rifkin	Trenton, N. J.
Brandon Garner Rightmire (Summa cum laude and with High Distinction in Mathematics)	Columbus
Robert R. Robbins	Dayton
Julia Robie	Columbus
Sylvia Roselle Roseman	San Antonio, Texas
Charles Francis Rosen (cum laude and with Distinction in English)	Cleveland
*Gertrude Agathe Rosen	Steubenville
Robert Marshall Ross	Xenia
Mary Kathryn Royer	Columbus
Nathan Albert Rubin	Cleveland
Stanley Sackin	Trenton, N. J.
Marvin Jerome Sadugor	Cleveland
Isadore Saul Saltzman (with Distinction in History)	Paterson, N. J.
Martha Elizabeth Sater	Columbus
Kenneth Lisle Schafer	Youngstown
*John Schaffer	Dayton
Arthur Bernard Scharff	Memphis, Tenn.
Meyer Scheinberg	Passaic, N. J.
Edna Annadee Schild	Canton
Mary Augusta Schirman	Portsmouth
Joseph Urlin Schoenborn	Columbus
Blanche Virginia Scott	Lakewood
David Francis Sennett	Aliquippa, Pa.
Ralph Burdette Senseman	Tipppecanoe City
Wilma Brosher Setterfield	Columbus
Benjamin Mark Sheinberg	Cleveland
Charles Craig Smith (with Distinction in Political Science)	West Jefferson
Earl Essau Smith	Cleveland
Elmer Roger Smith	Columbus
Wayne Clement Smith	Ashland
Jean Marjory Snell	Hubbard Woods, Ill.
William Cuthbert Snowball (cum laude)	Niles
Frank Leslie Snyder	Hamilton
Samuel Bernard Sonkin	Columbus
Thomas Hollister Southard (cum laude)	Columbus
Kenneth Oliver Stark	Columbus
Vernon Dean Stephens	Woodfield
Margaret Virginia Stevens	Columbus

* Two degrees.

Lucy Virginia Stone	Columbus
Natalia Sydow Stone	Columbus
Mary Elizabeth Streeper	Columbus
Charles Richard Taylor	Cincinnati
* Two degrees.	
Sarah Ellen Teachout	Columbus
Boyd Elbert Teegardin	Duval
William Kernahan Thomas (cum laude)	Columbus
Lester Kenneth Thompson	Columbus
Robert Daniel Thompson	Alpha
Irma Venessa Thurman	Cleveland
Carl William Tirey	Columbus
Doris Lorena Todd	Elyria
Helen Emeline Todhunter	Washington C. H.
Joseph Solomon Torchinsky	Galion
Viola Rose Towns	Columbus
Carl Craddock Tucker	Portsmouth
John Francis Ury	Defiance
*Joseph Kenneth Walkup	Columbus
Franklyn Hilleary Walls	Zanesville
Edward Henry William Walz	Columbus
David Paul Ward	Pemberville
Margaret Dove Ward	Seneca
John Belden Watson	Columbus
James William Webster	Springfield
Arthur Edwards Wentz	Mechanicsburg
Robert Meek Weston	Columbus
Martha Elizabeth Whitney	Columbus
*Eleanor Mae Wilbur	Columbus
Jean Will	McArthur
Alvin Richard Williams	Cleveland
David Anthony Williams	Venetia, Pa.
Gerald Newton Wilson	Columbus
Jessie Helen Wilson	Dayton
Melvin Robert Wilson	Girard
Ruth Wise	Ottawa
Malcolm Nicholson Wolfe	Columbus
Mary Woodworth Wolfe	Jamestown, N. Y.
Richard LeRoy Yeager	Columbus
*Walter Estey Yingling	Lima
Frank Ernest Zimmer	Urbana
Sidney Zimmerman	Long Branch N. J.

(Two hundred fifty-three candidates)

BACHELOR OF SCIENCE

*Byron Bennett Blank	Waynesfield
Arthur Alexander Brown	Amanda
*Emanuel Caplan	Steubenville
Everett Marquis Chalker	Garrettsville
Thomas Raymond Cunningham	Findlay
*Stanford Seward Daw	Wellsville
Jacques Robert Octave Foure	Columbus
*William Russel Gibson	Columbus
Walter Kimpton Gregg	Dayton
Walter Bertram Horton	St. Marys
*Laurence Marion Ihle	Columbus
*Orville Lee Layman	Germantown
Carl Mankinen	Ashtabula
Francis Elmer Merriitt	Garrettsville
*Harold Mills	Clifton
Morris Pipp Montlack	Cleveland
Walter Joseph Urbanski	Lorain

* Two degrees.

Jack Widrich (cum laude).....	Cleveland
Edward Alex Zajkowski.....	Maspeth, N. Y.
(Nineteen candidates)	

COLLEGE OF COMMERCE AND ADMINISTRATION

Dean: WALTER C. WEIDLER

BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION

Harry Elroy Alban.....	Newark
Hershel Walter Amburn.....	Sandusky
Harry Sanford Barber.....	Painesville
Alvin Lester Barnett.....	Cleveland Heights
William Milfred Batten.....	Parkersburg, W. Va.
Roland Henry Bauer.....	Lawrence, Mass.
Martin Bender.....	Cleveland
Richard Baker Benson.....	Columbus
John Darrell Black.....	Lima
Sadye Miriam Bobrof.....	Canton
Kenneth Frank Bott.....	Alliance
Stella Elizabeth Bowen.....	Columbus
Henry Theodore Bowlus.....	Pemberville
Robert Osborne Boyles.....	Columbus
Dorothy Lucile Braun.....	Springfield
Myron Alwin Brethauer.....	Fayette
Stephen James Buchanan.....	Willshire
Carl John Burk.....	Troy
Ralph Elmer Cain.....	Holyoke, Mass.
Robert Brown Calhoun.....	Newcomertown
Charles Clifford Callahan (with Honors).....	Wellston
Ruth Martha Cammerer.....	Dayton
Milton Ciralsky.....	Toledo
Robert Russell Clapsaddle.....	Alliance
Andrew Jackson Condon.....	Hamilton
Joseph Timothy Corcoran.....	Holyoke, Mass.
Ovidius Gabriel Corsatea.....	Warren
Julius Glenn Crihfield.....	Columbus
Julia Helen Davisson.....	Columbus
Herbert William Decker.....	Columbus
Virginia Evelyn Denbrook.....	Cleveland
James Wilbur Dille.....	Kenton
Harry Roger Drackett, Jr.....	Cincinnati
Helen Eagle.....	Columbus
Wilmer Chester Egelhoff.....	Columbus
Mary Edythe Ewing.....	Findlay
Wesley Eugene Fessler.....	Youngstown
Wendall Benton Fidler.....	Marion
Josephine Von Hess Finley (with Honors).....	Dayton
Kenneth Boy Fishpaw.....	Pickerington
James Donald Forbes.....	Wellsville
Andrew Douglas Ford.....	Columbus
Norman Frederick Franke (with Honors and with High Distinction in Accounting).....	Lakewood
Arthur Sanford Freedman.....	Cleveland
John Otto Friedlinghaus.....	Columbus
Elizabeth Friedman.....	Slippery Rock, Pa.
Virgil LeRoy Furry.....	West Manchester
John Stanley Galehouse.....	Doylestown
Mary Lois Gehring.....	Columbus
Lawrence Ira Glick.....	Huntington, W. Va.
Edward Louis Goddard.....	Wellston
Clarence Arthur Gonter.....	Dalton
Richard Willson Grace.....	Columbus
Paul Chaney Greenwood.....	Youngstown

Clifford Neville Hamilton.....	Warren
Alphonse Carl Hampel.....	Dayton
Martin Lester Hanna.....	Bowling Green
Seymour K. Harris.....	Cleveland
Frank Lewis Harrison, Jr.....	Barnesville
Robert Wottring Harrison.....	Columbus
Carl Doyle Warren Hays.....	Dorset
Herschel Kelley Headley.....	Akron
Russell Aten Heddleston.....	East Liverpool
Waldo Garner Henry.....	Columbus
Stanley George Hiner.....	Ashland
William Robertson Hizar.....	Columbus
Joe Ralph Hoffer.....	Youngstown
Stuart Knight Holcomb.....	Erie, Pa.
George William Horton.....	Wilmington
Paul James Howell.....	Salem
Alvin Lewis Iams.....	Dayton
Lewis Phillip Jacoby.....	Lorain
Ruth Ellen Johnson.....	Moundsville, W. Va.
Evan Charles Jones.....	Columbus
Thomas Martin Jones.....	Venedocia
Carl Jack Kaplan.....	Cleveland
Russell Howard K'Burg.....	Wooster
Bernard Spencer Keen (with Honors and with Distinction in Industrial Organization).....	Akron
Alice Sylvia Kelm.....	Canton
Richard William Kiinzler.....	Put-in-Bay
William Talbot Kirk.....	Lakewood
Lester John Klenk.....	Port Clinton
Kathleen Klotz.....	Chillicothe
Vance Martin Kramer.....	Findlay
Lew Coffman Kreglow (with Honors and with Distinction in Accounting).....	Columbus
John Joseph Laffey.....	Madeira
Harry Eugene Larson.....	Bridgeport, Conn.
Francis Willard Leese.....	East Liverpool
James David Long.....	Centerburg
Ruth Faye Ludwig.....	Columbus
Medard Richard Lutmerding.....	Cincinnati
Martha Frances Mahaffey.....	Mt. Vernon
William Russell Martin.....	Mansfield
Morris Lee Mattlin.....	Columbus
Charles Cullen Maul, Jr.....	Wyoming
Malcolm Meredith McAllister.....	West Lafayette
Ned Merrill McLaughlin.....	Columbus
Alferd Pearl McPheron.....	Marietta
John Lyle Mereer.....	Columbus
Joseph Aldrich Miller.....	Lorain
Ralph Edward Miller.....	Portsmouth
Reid John Montgomery.....	Richwood
Edward Roe Moore.....	South Charleston
Glenn Arthur Motts.....	Louisville
Robert Ellsworth Myers (with Honors and with Distinction in Accounting).....	Canton
Robert Thistle Neuenschwander.....	Sistersville, W. Va.
Richard LaMonte Nolan.....	Clyde
Irvin Oscar Olsen.....	Akron
Jack Nevin Paddock.....	Lakewood
William Bernard Papier (with Honors and with High Distinction in Economics).....	Columbus
John William Paynter (with Distinction in Accounting).....	Zanesville
Sidney Pearlman.....	Cleveland Heights
Richard Wendell Pharis.....	Columbus
Harry Post.....	Youngstown
Warren Austin Preston.....	Cuyahoga Falls
Robert Chatterton Pulling.....	Erie, Pa.
Howard Paul Rabenstein.....	Lockland
Leland Stanford Ramsey.....	East Liverpool

Mildred Picket Rardin	Columbus
John Dudley Reeves	Columbus
Homer Leon Reiter	Youngstown
Robert Eby Riegel	Greenville
Jeannette Lubic Rosenberg	Wheeling, W. Va.
Jacob Walter Routman	Sharon, Pa.
Clarence Charles Ruffin	Louisville
Elmer Allen Rule (with Honors)	Toledo
Ruth Elizabeth Russell	Columbus
Jacob Henry Schaeffer	Schoharie, N. Y.
*John Schaffer	Dayton
Edward Frederick Schlezinger	Columbus
Edwin Bacheldor Schmink	Columbus
Stanley Richard Scholz	Lorain
Helen Frances Schulte	Columbus
Virgil Albert Segale	Loveland
Harold Russell Seyler	Batavia
John Edward Sheehan	Northampton, Mass.
Herman Whitney Sidebottom	Columbus
Lloyd Phillip Smith	Woodsfield
Melvin Owen Smith	Marion
Paul Everest Smith	Utica
Max Kaelin Sniffen	Nelsonville
Edward George Sommer	Lakewood
Robert Riley Speakman	New Holland
Paul Marcus Spitz	Cleveland Heights
Gene Bradley Stedman	Windsor, Ont., Can.
William Arthur Summers	Lakewood
Lafayette Taylor	Portsmouth
Harold Freeman Tenney	Toledo
Myron Edwin Thomas	Columbus
Raymond Warner Tooney	Frankfort, N. Y.
Joseph John Van Heyde	Columbus
Harold Homer Von Kaenel	Dover
Lawrence Medbery Walters (with Honors and with Distinction in Finance)	Columbus
Marian Elizabeth Watjen	Columbus
Irvin Robert Weiss	Cleveland
George Leedom Wilson	Columbus
Wilber Allen Winchester	Columbus
Clark Irwin Witwer	Akron
Helen Virginia Wolgamot	Columbus
Edgar Earl Woodward	Portsmouth
Richard Adam Woolery	Dayton
Harold Franklin Zieg	Fredericktown
Herbert Ziegler	Huntington, W. Va.

(One hundred sixty-three candidates)

BACHELOR OF SCIENCE
IN JOURNALISM

Orville Adler	Perth Amboy, N. J.
Geraldine Marie Austin	Lorain
Sidney Cecil Carnes	Barnesville
Robert Addison Carr	Columbus
Murray Philip Chapman (with Distinction in Journalism)	New York, N. Y.
Benjamin Cohn	Cleveland
*Virginia Franklin Dayton	Newark
Odessa Dubinsky	Mt. Vernon
Florence Louise Edwards	Newark
William Sloan Fisher	Grove City, Pa.
Helen Anne Fox	Zanesville
Anna Ruth Fulton	Columbus
Alice Mae Hoffman (with Honors)	New Madison

* Two degrees.

Alice Elizabeth Mealey.....	East Cleveland
Harvey Sanford Miller (with Distinction in Journalism).....	Cleveland
Christmas Natale Nacci.....	Bellaire
Esther Ecky Patricof.....	Dayton
Alvin Norman Rosensweet.....	Dayton
John Thomas Saltz.....	Columbus
Alton Carl Stein.....	Woodville
Naomi Marie Stolte.....	Dayton
Vera Margaret Stone.....	Canton
William Edward Watson.....	Middletown
Harvey Earl Wilson.....	Rockford
*Thomas White Young.....	Columbus

(Twenty-five candidates)

BACHELOR OF SCIENCE IN SOCIAL ADMINISTRATION

Thelma Lauretta Barth.....	Grafton
Joseph Herbert Bishop.....	Columbus
Grace Virginia Booker.....	Columbus
Carlos Jane Davis.....	Columbus
Marjorie Anne Dressell.....	Columbus
Ruth Elizabeth Gibson.....	Akron
Ruth A. Habink.....	Cleveland
Abbie W. Hawk.....	Cleveland
Betty Herrick.....	Uhrichsville
Lucille Anna Mayer.....	Middleport
Edith Hamilton Monroe.....	Lockland
Mildred Lillian Nalley.....	Columbus
Harriet Mayce Newman.....	Youngstown
Benedicta Garnet Olson.....	Ashtabula
Maurice Austin Rosenthal.....	Trenton, N. J.
Helen Elizabeth Shields.....	Columbus
Margaret Emily Townhill.....	Cleveland
Geraldine Marion Traponsky.....	Painesville
Mary Jane Tyler.....	Ashtabula
Nora Geraldine Young.....	Chardon

(Twenty candidates)

COLLEGE OF EDUCATION Dean: GEORGE FREDERICK ARPS

BACHELOR OF SCIENCE IN EDUCATION

Hilda A. Allen.....	Bellaire
Merton Whitney Alvord.....	Montville
Ruth Elizabeth Arduser.....	Toledo
Ruth Christina Bach.....	Georgetown
Josephine Mabel Bailey.....	Columbus
Esther Lotier Baird.....	Columbus
David Alban Ballard.....	Columbus
Hazel Ferne Barch.....	Duval
Charlotte Marion Barker.....	Dayton
Mary Elsie Barr.....	Columbus
Janet Louise Barthlow.....	Columbus
Florence Eva Bash.....	Utica
Carl Edward Baumgartner.....	Pleasant Ridge
Phyllis Janet Bayer.....	Columbus
Howard Boyd Beckes.....	Columbus
Dorothy Lucille Beckett.....	Commercial Point
Ellen Mary Benbow.....	Columbus
Evelyn Gertrude Bessey.....	Columbus

* Two degrees.

Miriam Wanita Betts.....	Columbus
Wealtha Adelaide BeVier, B.A.....	Columbus
George Samuel Binen.....	Cleveland
Mary Virginia Bing, B.A. (Ohio Wesleyan University).....	Pomeroy
Jesse Blakely.....	Cincinnati
Mary Elizabeth Bock.....	Lorain
Nona May Bolander.....	Marion
Elizabeth Louise Brown.....	Institute, W. Va.
Raymond Howard Budd.....	Columbus
Henry Bruce Bullard.....	Hamden
Ruth Evelyn Bullock.....	Columbus
James Lake Burden.....	Mt. Vernon
Alice Lucile Burkett.....	Rawson
Milton Rogers Byerly.....	West Jefferson
Annabel Jane Calvert.....	Columbus
Marjorie Dunn Campbell.....	Columbus
Anne Marie Capretta.....	Columbus
John Paul Capretto.....	Geneva
Helen Naomi Cary.....	Plain City
Helen Cornelia Castle.....	Swanton
Mildred Genevieve Caulkins.....	Columbus
Glenna Maxine Chrisman.....	London
Kathryn Pherabe Clark.....	Gettysburg
Dorothy Ellen Coffman.....	Columbus
Helen Christine Cole.....	Medina
Wilda Anderson Coleman.....	Columbus
Genevieve Dollison Corbin, B.A.....	Columbus
Neola Delpha Cottrell.....	Columbus
Emma Elizabeth Crabtree.....	Steubenville
Lester Wayne Cramer.....	Findlay
*Sandy Crisafulli.....	Wadsworth
Marion Evelyn Culp.....	Columbus
Herbert Bashford Currier.....	Columbus
Rex Emerson Daniel, B.A.....	Columbus
Helen Day, B.A.....	Brinkhaven
Mary Joanna Day.....	Marietta
Herbert Winfred Deem, B.E.E.....	Columbus
Viola Mae Deibel.....	Columbus
Malavon Jennette Dennis.....	Ashley
Ellsworth Carmon Derbyshire.....	Eaton
Elizabeth Marjorie Dettre.....	Newark
Molton DeWalt.....	Crestline
Evelyn Eleanor Dick.....	Columbus
Evelyn Kathryn Dillon.....	Cleveland
Dorothy Parsons Drake.....	Dayton
Elizabeth Sarah Dudley.....	Columbus
Kathleen Elizabeth Dumm.....	Stoutsville
Lyana Louise Dyer.....	Columbus
Maxine Ina Dyer.....	Columbus
Warrine Evelyn Eastburn.....	Delaware
Helen Magdalene Eby.....	Seville
Delmar David Eggert.....	Columbus
Ruth Beatrice Endich.....	Steubenville
*Jean Elizabeth Ervin.....	Columbus
Simon Eudovich.....	Cleveland
Marian Fagin.....	Ashtabula
Lois Lorena Fasig.....	Arlington
Maxine Louise Fears.....	South Bend, Ind.
William Howard Fink.....	Findlay
Rosella Finkelstein.....	Dayton
Carol Rena Firth.....	Cleveland Heights
Irwin Sam Fishman.....	Cleveland
William Bernard Flaherty.....	Hamden, Conn.

* Two degrees.

Charles Francis Flynn.....	Toronto
Pauline Emma Freytag.....	Fort Loramie
Florence Marie Fulton.....	Youngstown
Ruth Elnora Gerhardt.....	Washington C. H.
Sara Louise Gilgen.....	New Philadelphia
Ena Gwendolyn Glandon.....	Jackson
Mary Louise Glick.....	Columbus
Ellen Kathryn Gloyd.....	Worthington
Morris Golomb.....	Youngstown
Margaret Ruth Gongwer.....	Ashland
Clara Louise Goss.....	Worthington
Kathryn Lenore Grannis.....	Pioneer
Paul Ridgeway Grim.....	Leesburg
Viola Margaret Gunn.....	West Unity
Josephine Inez Gunnett.....	Columbus
Martha Margaret Haley.....	Findlay
John Gailard Hall.....	Quaker City
Mary Almena Hall.....	Springfield
Mary Isabelle Hall.....	Columbus
Beatrice Winifred Hanelin.....	Youngstown
Helen Adele Hannah.....	Toledo
Mildred Janet Hardin.....	Columbus
Sylvia Claire Hardy.....	Tabor, Ia.
Evelyn Amanda Harrison.....	Columbus
Dwight Kentfield Hathaway.....	Bloomville
Laura Barbara Hauschild.....	South Euclid
Mary Weidner Haverman.....	Columbus
*Alice Jeannette Hayes.....	Columbus
Esther Lillian Hellerstein.....	Dillonvale
Lorraine Stevens Henderson.....	Columbus
Oscar William Hendricks.....	Canfield
Jack Lee Hendrickson.....	Jerusalem
James Arthur Herrick.....	Twinsburg
Mary Caroline Hiner.....	Columbus
Barbara Louise Hirsch.....	Chillicothe
Elsie Marie Holladay.....	Hillsboro
Lillian Alice Holtz.....	Green Springs
Carl Edwin Hoover.....	Columbus
Robert Irwin Hubbard.....	Amherst
Ruth Mae Humberstone.....	Columbus
Helen Crain Hunter.....	Columbus
Solomon Byron James.....	St. Louis, Mo.
Edward Theodore Johnson.....	Cadiz
Olive Frances Jones.....	Columbus
Charles Daniel Kazmerchak.....	Nanticoke, Pa.
Edith Alta Keeler.....	Marion
Lucille Opal Kelster.....	Wooster
Grace Randolph Kendrick.....	Columbus
Dorothy Donahey King.....	Columbus
Helen Louise King, B.A.....	Columbus
Minna Mary Klauminzer.....	Cleveland
Ralph Elbert Klug.....	Zanesville
Elizabeth Griswold Knapp.....	Delaware
Marye Eva Krejci.....	Columbus
Frances Marcella Krumm, A.B. (St. Marys of the Springs College).....	Columbus
Geneva Isabel Kuntz.....	Columbus
Timothy Dwight Ladd.....	East Claridon
Louise Lamb.....	Columbus
Walter Albert Lawrence.....	Columbus
Thelma Berniece Lehman.....	Croton
Jessie Van Eman Little.....	Sistersville, W. Va.
Catharine Regina Loges.....	Dayton
Virginia Lee Long.....	Sharonville
Mary Jane Loomis.....	Columbus

* Two degrees.

Cathryn Pauline Lorenzen, B.A.	Huron
Lillian Opal Luburgh	Stafford
Cora Mondaaye Lucas	Columbus
Sadie Louise Luebers	Wilberforce
Helen Clair Mann	Findlay
Margaret Belle Marsh	Columbus
Herman Marcus Martin	Pennsville
Mary Ruth May	Steubenville
Sara Melissa McCalla	Bellefontaine
Mary Lou McCarthy	Findlay
Henry Albert McClelland	Kinsman
John Edmund McCollough	Butler
Helen June McCoy	Columbus
*Margaret Ann McDevitt	Columbus
Betty McDonald	Columbus
James Marshall McDonald	Columbus
Fay Arlene McDowell	Dalton
Louise Woodward McKay	Columbus
Lorna Anne McKim	McVictory
Harold Huston McLain	Columbus
Lucy Alice McRitchie	Lima
*Marjorie Marie Merz	Columbus
*Christine Louise Meyer	Columbus
Frances Willard Miller	Arcanum
Helen Miller	Norwalk
Muriel Alice Miller	Columbus
Thelma Mills	Nelsonville
Grace Beatrice Mitchell	Columbus
Elizabeth Barbara Mohr, B.A.	Columbus
Paul Eugene Monett	Columbus
Norma Neal Moody	Dresden
Carrie Louise Morgan	Middletown
Marian Mae Morris	Canton
Nellie Abigail Morris	Columbus
Vincent Morris	Girard
Robert Morrison	Cleveland
Mary Louise Neumeier	Conover
Agnes Marie Neutzling	Bellaire
Mildred Esther Nihousen	Cuyahoga Falls
Ruth Evelyn Noyes	Detroit, Mich.
Ethel Nutis	Columbus
Alma Marie Obenland	Columbus
Sara Catherine Oglesbee	London
Evelyn Mary Overmyer	Fremont
Ruth Elizabeth Parker	Washington, D. C.
Elvira Ernestine Parrish	Steubenville
Helen Arlene Pealer	Columbus
Dorothy Ann Philson	Racine
Gilbert Peter Pilskaln	Cleveland
Amelia Nora Pokorny	Chardon
Geraldine Fagley Pope	Youngstown
Doris Gaskill Porter	Warsaw
Marjorie Olive Porter	Hillsboro
Elizabeth Rebecca Priddy	Van Wert
Marguerite Elizabeth Pritchett	Columbus
Lucille Marie Raether	Columbus
Mildred H. Rasmus	Columbus
Esther Louise Rees	Newark
Maryanna Reighley	Columbus
Eleanor Galbraith Rice	The Plains
Ruth Jane Richards	Columbus
Franklin Harry Roberts, B.A. (Ohio Wesleyan University)	Bucyrus
Naomi Ruth Rodeheffer	St. Marys

* Two degrees.

Nadine Dorothy Rose.....	Columbus
*Gertrude Agathe Rosen.....	Steubenville
Catharine Louisa Roush.....	Lindsey
Charles Arthur Rowan.....	Columbus
Alice Lydia Rumsey.....	Columbus
John Merritt Rutledge.....	Ohio City
Edward Nathan Saferin.....	Cleveland
Margaret Eva Schoene.....	Columbus
Mary Elizabeth Scofield.....	Lebanon
Harold Duane Scott.....	L. Walhonding
Clara Lucile Scovell.....	Johnstown
Phyllis Virginia Seabrook.....	Columbus
Bernice Clara Setterlin.....	Columbus
Charles Henry Sharp.....	South Vienna
Sara Elizabeth Shaw.....	Gallipolis
Mary Elizabeth Shepherd.....	Zanesville
Fannie Tybel Shiff.....	Lorain
Roxine Shinbach.....	Toledo
Elizabeth Bernice Shockley.....	Columbus
Melvin Albert Sickafoose.....	Waynesburg
Marie Skrobak.....	Cleveland
Alice Hall Slone.....	Cleveland
Elizabeth Sara Smith.....	Columbus
Estelle Mildred Smith.....	Columbus
Jane Warden Steenson, B.A.....	Columbus
Julia Estella Stephenson.....	Zanesville
Elizabeth Tallichet Stout, A.B. (Western College for Women) ; M.A.....	Xenia
Emily Ruth Stout, B.A.....	Columbus
Leabeth Taylor.....	Powell
Norman McKinney Taylor.....	Galloway
Ethel May Teeter.....	Tippecanoe City
George Locke Thompson.....	Cincinnati
Dorothy Irene Timlin.....	Youngstown
Mary Agnes Tobin.....	Warren
Mary Louise Trautman.....	Columbus
Albert Vacca.....	Columbus
Ethel Lola Vance.....	Canton
Robert Donald Wade.....	Columbus
Mary Ellen Waldron.....	Springfield
Raymond Lee Walter.....	Carroll
Hyman Robert Wasserman.....	Cleveland
Janet Wasserstrom.....	Columbus
Kathryn Armida Wells.....	Columbus
Pauline Hill Wells.....	Wellington
Mary Louise Welsh.....	London
Marjorie Collett Werkmeister.....	Dayton
Kenneth West, B.A., B.E.E.....	Columbus
Lucille Erma Westinghouse.....	Columbus
Elton Carl Whitcomb, B.A.....	Wauseon
Robert James White.....	Columbus
*Eleanor Mae Wilbur.....	Columbus
Ruth Elizabeth Woods.....	Columbus
Marian Barsha Work.....	Columbus
Thelma Mae Worrick.....	Wheeling, W. Va.
Mary Ellen Wright.....	Lockbourne
Lena Elizabeth Wyant.....	Portsmouth
Ednah Blanche Young.....	Amanda
Ilo Belle Young.....	Bremen
Leora Kathryn Youngblood.....	Lorain
Reuben Isadore Zeleznick.....	Cleveland

(Two hundred sixty-eight candidates)

* Two degrees.

BACHELOR OF FINE ARTS

Anthony George Anderla.....	Mantua
Wallace Gordon Atkinson.....	Olmsted Falls
Arthur Marion Baclawski.....	Cleveland
Katharine Louise Bailey, B.A. (Connecticut College).....	Easton, Pa.
Carroll Elsworth Bazler.....	Columbus
Robert Christian Binkley.....	Lima
George Edward Creed.....	Cleveland
Roberta Elizabeth Diehl.....	Kent
Ruth Elizabeth Kay.....	Washington C. H.
Marjorie LaVerne Kircher.....	Defiance
Frank Alexander Livingston.....	Columbus
Harold Arthur Marsh.....	Cleveland
Frederick Kenneth Mayer.....	Columbus
Herbert Charles Meloy.....	Garrettsville
Linn Lovejoy Phelan.....	Rochester, N. Y.
Paul Shepherd Rice.....	Dayton
Margaret Pauline Steenrod.....	Maplewood
Victor Thomas Suhadolnik, B.A. (John Carroll University).....	Euclid
Robert Thomas Walker.....	Cleveland
Eleanor Louise Wolfrom.....	Shippensburg, Pa.

(Twenty candidates)

COLLEGE OF ENGINEERING

Dean: EMBURY A. HITCHCOCK

BACHELOR OF ARCHITECTURE

Theodore Woodbridge Brooks.....	Columbus
William Selsor Brown.....	Columbus
*James Kirker Campbell, Jr.	Columbus
Edward John Munter.....	Canton
Alexander Franks Noverre Musson.....	Findlay
Charles Bowen Smith.....	Marion
Nelson Edward Thal.....	Toledo
Alfred Todd Tibbals.....	Columbus
Richard Lorin Ulrich.....	Cambridge City, Ind.

(Nine candidates)

BACHELOR OF ARCHITECTURAL ENGINEERING

*James Kirker Campbell, Jr.	Columbus
Mordaunt Doudna Coons.....	Columbus
Harold Taft Emery.....	Columbus
James Edward Geis.....	Columbus
George Alfred Krebs.....	Newark
Edgar Hill Latham.....	Columbus
Kenneth Allen Parsons.....	Columbus
John Andrew Stritmatter.....	Cincinnati

(Eight candidates)

BACHELOR OF CERAMIC ENGINEERING

Cyril Bradwell.....	Delaware
Henry Clay Ellinger.....	Thornville
Kenneth Eugene Harman.....	Columbus
Philip Sisson Johnston.....	Columbus
Lewis Henry Keller.....	Grove City
Charles Jacob Koenig.....	Columbus
Robert Herman McCaffrey.....	Columbus
Roger Herman McNichols.....	Columbus
Warren Christian Medert.....	Columbus
Arthur Joseph Metzger.....	Columbus
Ralph Richard Rhodes.....	Westerville

Ralston Russell, Jr.	Pomeroy
Lawrence Frederick Sixt	Columbus
LeRoy Kern Sosey	Columbus
Neal Wyer	Columbus

(Fifteen candidates)

BACHELOR OF CHEMICAL ENGINEERING

Paul Wilson Blume	Washington C. H.
Lewis Warrington Chubb, Jr.	Homewood, Pittsburgh, Pa.
Conrad Ferdinand Daum	Seranton, Pa.
†David Monroe Goodfriend	Kenova, W. Va.
Harry James Green, Jr.	St. Louis, Mo.
Samuel Stark Johnston	Steubenville
John Clemence March	Elizabeth, Colo.
John Paul Metzler	Toledo
Paul Eugene Mong	North Baltimore
Frederick Louis Mueller	Okolona
David Gustive Schepp	Wheeling, W. Va.
Edward Martin Schoenborn, Jr.	Columbus
Roy Edward Smith	Columbus
Lawrence Sidney Wells	Wellington

(Fourteen candidates)

BACHELOR OF CIVIL ENGINEERING

Horace Walter Ark	Springfield
Richard Bard, Jr.	Lakewood
Clyde Webster Bowser	Columbus
William Taft Collins	Cincinnati
Joseph Clement Deladonne	Columbus
Dominic DiCicco	Garfield Heights
Ernest Downie	Youngstown
Charles Gibson Duncan	Cincinnati
William Guy Fultz	Bellefontaine
Orrville William Gruebmeier	New Bremen
Louis Horton Herschler	Columbus
Joseph Nelson Jones	Eaton
Oliver Krug Klafter, A.B. (Capital University)	Sandusky
Willis Gerhart Knasel	Anna
Paul Raymond Matthews	Columbus
Joseph Melvin McCoid	Duncan Falls
John Henry McElroy	Lockwood
Neil John McMillen	Columbus
Donald Anthony Miller	Fremont
Chalmer David Moehring	Dayton
Lee Dixon Moody	Dresden
Harry Myer Nacdimen	Columbus
Caleb Ellsworth Osborn	South Vienna
Barton Harrington Shaw	Columbus
Ernest Hervey Snodgrass	Steubenville
Devon Oliver Thompson	Toledo

(Twenty-six candidates)

BACHELOR OF ELECTRICAL ENGINEERING

George Edward Anthony	Columbus
Henry LeRoy Blessing	Jeffersonville
Chester Morgan Brinsley	Springfield
Vincent Dudley Bryant	Franklin
Paul Hayden Dunipace	Pemberville
Clayton LeRoy Haller	Toledo
Thomas Albert James	Columbus
Richard Bennett Jeffrey	Worthington
John Michael Killoran	Cleveland

† Died December 27, 1931.

Wilson Theodore Leatherman	Wadsworth
John Woy Leech	Columbus
Harry William Lehman	Kenton
Charles Lake Lucal	Sandusky
John Dominic Marotta	Cleveland
Robert Filbert McCabe	Piqua
Harlan Albert Messner	Orrville
William Molland Moore	Bellevue
GEORGE WILSON MOYER	Delaware
William Pius Mueller	Sebring
Robert Allan Nolan	Columbus
William Vincent Organic	Youngstown
Vincent D. Parrish	Columbus
Darwin Sprathard Renner	Columbus
Carl George Simon	Uhrichsville
Charles Brunson Sloan	Camp Chase
Paul Harvard Smart	Ostrander
William Thomas Standish	Woodstock
Harold Allan Todhunter	Washington C. H.
Lawrence Phillip Tracy	Columbus
*Ralph Raleigh Van Atta	Newark
J. Willard Welker	Dayton
Wilson Mahlen Wertz	Toledo
Virgil Laverne Widler	Williamsville, N. Y.
Linville Loder Young	Cable

(Thirty-four candidates)

BACHELOR OF ENGINEERING IN MINING

John Wilson Cole	Findlay
James Tuttle Davidson	New Lexington
Clyde Leslie French	Massillon
John Francis Klein	Dayton
Rodger Lewis Schaefer	Springfield

(Five candidates)

BACHELOR OF ENGINEERING PHYSICS

Jack Ball	Columbus
Arthur Shotton Coffinberry	Cleveland
Mark Ellsworth Ward	Lancaster

(Three candidates)

BACHELOR OF INDUSTRIAL ENGINEERING

Harold Gleason Bailey	Columbus
Howard Kenneth Bentz	Columbus
Tyler Latham Brightman	Worthington
Albert Jefferson Bundy	Delaware
Henry Francis Carroll	Morrow
Howard Clinton Cottier	Lakewood
Henry James Galmish	Erie, Pa.
James Lincoln Gibboney	Roanoke, Va.
Ralph Gerald Harmon	New Straitsville
Paul Wheritt Holstein	Columbus
James Kearns McDowell	Columbus
Leroy Noble McHenry	Cozaddale
Louis Wilbur Mellott	Woodsfield
Walter Harmon Mercer	East Liverpool
Joseph Emerson Rose	Columbus
Charles Louis Seelbach	Columbus
*Harry Peter Snyder	Lorain
John Francis Strick	Lorain
John Ardan Sullivan	Columbus

* Two degrees.

Patterson Sylvester Weaver	West Newton, Pa.
George Thomas Wright	Lima

(Twenty-one candidates)

BACHELOR OF MECHANICAL ENGINEERING

Roger Henry Bacon	Tiffin
Ralph Robert Baldenhofer	Springfield
Anthony Charles Buemi	Wadsworth
Edwin Graydon Chambers	Chicago, Ill.
Nelson Cianconi	Bellaire
Herman William Diehl	Huntington, W. Va.
Joseph Peter Gatto	Bellaire
William Henry Hallsteine	Columbus
James Oliver Harris	Wilmington
Carl Frederick Huddle	Napoleon
Robert Garland Kilgore	Norwood
Paul Frederick Lockett	Columbus
Arthur Thomas Loew	Columbus
Charles Marion McDermott	Akron
Robert William Reinicke	Dayton
Alfred Henry Roloson	Columbus
Robert Dewitt Shapter	Erie, Pa.
*Harry Peter Snyder	Lorain
Everett Chauncey Thorpe	Wayland
*Ralph Raleigh Van Atta	Newark
Hugh Newton Veley	Delaware
*Joseph Kenneth Walkup	Columbus
William Francy White	Toronto
Clarence Earl Wolf	Loudonville
Hoyt Francis Young	Gillespieville

(Twenty-five candidates)

BACHELOR OF METALLURGICAL ENGINEERING

Herbert Joseph Arnold	Springfield
Ernest Rouleau Craig	Louisville
Earl Henry Dick	Cleveland
Edwin Wilmot Earhart	Columbus
Richard Dennis Jenkins	Newark
John Wesley Shaw	Lorain
Aloise Freemont Sprankle	Canton
Charles Francis Underwood	Columbus

(Eight candidates)

BACHELOR OF SCIENCE
IN APPLIED OPTICS

Gordon Arthur Bixel, A.B. (Bluffton College)	Bluffton
James Smith Blocksom	Zanesville
Mary Esther Hughes, B.A. (Ohio Wesleyan University)	Indianapolis, Ind.
Mervyn Harry Kahl	East Cleveland
Charles Clemmer Kidwell	Columbus
Albert Klein	Cincinnati
Emanuel Lester Korb	Cincinnati
Marvin Russell Miller	Dayton
Charles Morton Polan	Huntington, W. Va.
Lincoln Milton Polan	Columbus
Zbyszko John Schoen	Buffalo, N. Y.
Harold Clarkson Snyder	Newark, N. Y.
William Richard Sutphen	Outville

(Thirteen candidates)

* Two degrees.

COLLEGE OF PHARMACY

Dean: CLAIR ALBERT DYE

BACHELOR OF SCIENCE
IN PHARMACY

Norman Nathaniel Beil	Cleveland
Earl Robert Berger	Cleveland
Roland Edgar Burkey	Baltic
August Joseph DeLeese	Cleveland
Kenneth Laverne Deppler	Bluffton
Joseph Gilman	Cleveland
Raymond Christian Graber	Akron
Charles Groner	Cleveland
George Renner Hale	Dayton
Ralph Forrest Johnston	Cecil
Beatrice Sherer Kenworthy	Dayton
Howard Francis Krichbaum	Delaware
George Walter Lawson	Steubenville
Emiel John Lehman	Payne
Meyer Sanford Levine	Cleveland
Alfonso Lugo	Sabana Grande, P. R.
Clyde Magnello	Canton
Robert George McCready	Wellsville
Lloyd Howard Piotter	Akron
Harold Webb Reed, B.A. (Ohio Wesleyan University)	Lancaster
Robert Burgoyne Robertson, B.A.	Toledo
Curt Albert Sandburg	Jamestown, N. Y.
Irwin Ralph Schweitz	Cleveland
William Emil Sovik	Youngstown
Herbert Edson Swan	Gary, W. Va.
Fred Lewis Wallace	Delaware
Leona Helen Wellock	Akron
Frank R. Wells	Barnesville
Raymond Wendel White	Chillicothe

(Twenty-nine candidates)

COLLEGE OF VETERINARY MEDICINE

Dean: OSCAR V. BRUMLEY

DOCTOR OF VETERINARY MEDICINE

Leo Edward Andres	Kelso, Ind.
Edwin Parker Barnes, Jr.	Columbus
Ray Merton Batchelder, B.S. (University of New Hampshire)	Durham, N. H.
Morgan Willard Bates	Washington C. H.
Lauren Leonhardt Bechtol	Okolona
James Robert Collier	Wilkinson, Ind.
George Frederick Delaplane	Greenville
John Raymond Durigg	Armstrong's Mills
Guilford Smith Elwood, B.S. (University of New Hampshire)	Derry, N. H.
Leo W. Fugate	Jamestown
Thomas Whitby Garrett	Columbus
Lyle Albert Gray	Adair, Ill.
Carl William Groppe	Martins Ferry
Russell E. Halstead	Xenia
John Marshall Holmes	Columbus
Robert Josephus Hoskins	Wilmington
John Luther Jones	Sandusky
James Ralph Karr	Coshocton
John Harold Knapp	Lebanon
Shefford Simpson Miller	New Rochelle, N. Y.
Leroy Francis Neuenschwander	LaRue
Olof Norling-Christensen	Columbus
Harvey Franklin Page	Paxton, Ind.

Arthur Abner Rohrer	Columbus
Elmer Lyle Rooks	Greenfield
Joseph Rudolpha Sakla	Ely, Minn.
Charles Eugene Streeter, B.A. (Amherst College)	Cummington, Mass.
Warren Leslie Tanner	Columbus
Lester Albert Treat	Blandford, Mass.

(Twenty-nine candidates)

PROFESSIONAL CERTIFICATES

CERTIFICATE IN PUBLIC HEALTH NURSING

Clara Olive Davis	Columbus
Louise Mary Ort	Columbus

(Two candidates)

CERTIFICATE OF GRADUATE NURSE

Madonna E. Baker	Greenville
Lois Rose Biddle	Columbus
Bernice Bernidean Billingsley	Columbus
Mary Frances Boone	Ashville
Marylu C. Castor	Mansfield
Pauline Edna Davis, B.S. (Michigan State Normal College)	Adrian, Mich.
Clara Elizabeth Devalon	Mt. Vernon
Doris Elizabeth Fenner	Plymouth
Marian Elizabeth Fuller	Columbus
Margaret Edna Griesheimer	Piqua
Grace Hafford Griswold	Worthington
Rose Mary Grove	Lancaster
Alice Elizabeth Haines	Washington C. H.
Maude Florence Hill	Plain City
Alma Marie Hutchins	Uhrichsville
Louise Stuart Kagay	Richwood
Lucile C. Kester	Greenville
Rose Barbara Kiener	New Lexington
Velma Dorothy Moury	Bellville
Andree Jeanne Peyraud	Columbus
Geraldine Jessie Pierce	Columbus
Lillian Beverly Preston	Columbus
Freedra Strait Pritchard	Columbus
Louise Heflyn Roane	Columbus
Elizabeth Annettie Robinson	Bellville
Eliza S. Rodgers	Camp Chase
Corinne A. Scott	Plymouth
J. Lucille Sherwood	Findlay
Catherine L. Simmons	Piqua
Dorothy E. Spangler	Stow
Jane Campbell Stuart	Cleveland
Margaret Nathalie Thayer	Piqua
Alberta A. Thompson	Byesville
Frances Elizabeth Weiss	Newark
Wilma Kathleen Wolfe	Junction City

(Thirty-five candidates)

SIXTY-THIRD ANNUAL REPORT

OF THE BOARD OF TRUSTEES OF THE

WISCONSIN STATE UNIVERSITY

FOR THE YEAR ENDING JUNE 30, 1923

WISCONSIN STATE UNIVERSITY

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